NEW HOME WARRANTY IN ALBERTA

THE CASE FOR EXTENDED COVERAGE

Alberta
MUNICIPAL AFFAIRS
Innovative Housing Grants Program

NEW HOME WARRANTY IN ALBERTA:

THE CASE FOR EXTENDED COVERAGE

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for
The Board of Directors
New Home Warranty Program of Alberta

The views and conclusions expressed and the recommendations made in this report are entirely those of the authors and should not be construed as expressing the opinions of Alberta Municipal Affairs.

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FOREWORD

The project documented in this report received funding under the Innovative Housing Grants Program of Alberta Department of Housing. In May 1986 the Alberta Department of Housing was amalgamated with Alberta Municipal Affairs which is now responsible for issuing this report.

The Innovative Housing Grants Program is intended to encourage and assist housing research and development which will reduce housing costs, improve the quality and performance of dwelling units and subdivisions, or increase the long term viability and competitiveness of Alberta's housing industry.

The Program offers assistance to builders, developers, consulting firms, professionals, industry groups, building products manufacturers, municipal governments, educational institutions, non-profit groups and individuals. At this time, priority areas for investigation include building design, construction technology, energy conservation, site and subdivision design, site servicing technology, residential building product development or improvement and information technology.

As the type of project and level of resources vary from applicant to applicant, the resulting documents are also varied. Comments and suggestions on this report are welcome. Please send comments or requests for further information to:

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This study was conducted under the guidance of a Ways and Means Committee, whose members are listed below. Their input is gratefully acknowledged.

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EXECUTIVE SUMMARY

The New Home Warranty Program of Alberta has been in existence since 1974 and has effectively eliminated the need for government consumer protection legislation in the residential construction industry in Alberta. Further, Alberta has played an important role in the development of other warranty programs in Canada and continually meets with these Programs and others around the world to exchange information and expertise. A National Warranty Council acts as a coordinating body for Canadian programs to exchange information.

The New Home Warranty Program of Alberta's basic functions are to:

a) register qualified builders,
b) establish construction standards,
c) protect deposits and down payments of consumers,
d) provide a warranty for new homes built under the provisions of the Program, and
e) provide a method to conciliate homeowner/builder grievances to ensure complaints are resolved.

In the Spring of 1985, the Alberta Department of Housing provided a grant to the New Home Warranty Program of Alberta for the purpose of conducting a study into the feasibility of the Program extending its five year major structural defect warranty for an additional five years.

The approach taken to establish the need for and feasibility of an extended warranty was as follows:

1. Surveys of builders and consumers were conducted to evaluate the need for additional protection as well as builder and consumer willingness to purchase an additional five years of major structural warranty protection. Attitudes and views toward the Program were also solicited.

2. A risk analysis was conducted in cooperation with Angus Reid Associates Inc. to evaluate the risks involved in extending the warranty. This analysis was compared to the previous claims experience of the Program and the various insuring alternatives which could be used to underwrite the risk. Three levels containing pessimistic, optimistic and most likely claim levels were presented and analyzed. The risks of insuring new homes and/or existing homes were also analyzed.

3. After potential claim levels were determined, premium options available to fund claims were examined. Two types of options were identified, namely a single premium and an annual premium paid every year for five years. The advantages and disadvantages of each option were discussed and evaluated.

4. In addition to the financial and insurance aspects of the coverage, legal and tax effects of the topic were examined.

A Committee, under the Chairmanship of Martin Smith of Calgary, Alberta, completed its report in August of 1985 and presented its first draft with recommendations to the Board of Directors of the Program on September 10, 1985. The report was accepted by the Board subject to an appraisal by an independent market research group of the findings of the consumer and builder surveys circulated as part of the study.

The proposed extended warranty option would provide an additional five years of major structural defect coverage as defined below:

'Major structural defects' means defects in workmanship or materials which have or are likely to have an adverse effect on the performance of the load bearing portion of the home. It is strictly a condition that, excluded as major structural defects, are defects in driveways, basement floors, garage floors, patios, sidewalks, retaining walls and all concrete construction which are not load bearing.

'Load bearing portion' shall, so as not to restrict the generality of the foregoing, mean footings, piles, basement walls, grade beams, teleposts or columns, beams of timber or steel, load bearing walls, floor joists, and roof trusses provided the foregoing support an integral part of the home or garage.

Conclusions Regarding Feasibility

There were three main conclusions:

1. Based on the surveys conducted, both builders and consumers were in favour of extending the current structural warranty for an additional five year period and were prepared to purchase it if and when offered.

2. The risks could be funded by the Program under various insurance alternatives.

3. The fees proposed in the surveys were acceptable to more than 70% of the respondents.

Final Recommendations

As a result of this study, the following recommendations have been adopted:

1. The optional extended major structural defect warranty will be offered on new homes only effective January 1, 1986.

2. The extended warranty will not be offered on homes whose warranties are due to expire because of the excessive risk due to selection (i.e., only those homeowners with reason to fear problems would enroll their units).

3. A premium of $100 will be charged for the additional five years of major structural defect coverage.

4. Major structural defect coverage will be maintained at $30,000 throughout the entire ten year period.

5. A refundable inspection fee of $100 will be introduced to assist in eliminating frivolous claims.

6. Liaison with the Department of Consumer and Corporate Affairs will be initiated to eliminate any problems with the Superintendent of Insurance which may arise as a result of offering the extended warranty coverage.

1.0 HISTORY

1.1 Introduction and Background

As a result of the continued recession in the Alberta economy and the dramatic effect it had upon the residential construction industry, the Board of Directors of the New Home Warranty Program of Alberta determined in the fall of 1984 that additional sources of revenue were required. Therefore, in November of 1984, the Board of Directors appointed a "Ways and Means Committee" under the Chairmanship of Martin Smith of Erin Homes, Calgary, to investigate alternative ways of raising revenue for the Program while at the same time providing additional advantages for home buyers in Alberta as well as for the Program's five hundred registered builders. Among the alternatives, it was decided to focus on the feasibility of extending the terms of warranty coverage.

1.2 Report Organization

This document summarizes the study which was undertaken to investigate the feasibility of extending the new home warranty in Alberta. Also, to provide the necessary context, Chapter 1 provides a brief history of the Canadian and Alberta experience in the new home warranty area.

Chapter 2 summarizes warranty experience in other countries, in particular those which already offer extended warranties. Chapter 3 elaborates the information gathering carried out with both builders and consumers, and Chapter 4 examines the insurance implications of an extended warranty. Chapter 5 presents final analysis and recommends a new extended warranty program for Alberta. In addition, this report contains appendices which provide additional background on the history of new home warranty in Canada including early minutes and lists of participating builders (Appendices 'A', 'B' and 'C'), legal documentation recording the terms of association of the Alberta Program (Appendices 'D' and 'E'), and a sample of the agreement entered into by participating builders with the Alberta New Home Warranty Program. Samples of builder and consumer surveys used in the study are included in Appendices 'G' and 'H'. Finally, a copy of the 'Sub-Trade and Supplier Bulletin Summary' which outlines elements of good building practice is attached as Appendix 'I'.

The result is that this document provides an overview of new home warranty in general terms as well as outlining the basis for an extended warranty program in Alberta. This report will be of interest to all those affected by new home warranty - builders, consumers and governments.

1.3 Investigation Into an Alberta New Home Warranty Program

In order to understand thoroughly the reasoning for the proposed extension of the existing five year Warranty Program, it would be beneficial to understand the background and history of new home warranty in Alberta and warranty in Canada, the reasons for its formation and what warranty programs have done since their incorporation to improve the quality of residential construction in Alberta, throughout Canada and in other countries around the world.

In 1961, Alberta builders, in response to growing government and consumer concerns that new home buyers should be adequately protected for their investment, formed a Warranty Feasibility Committee which investigated establishing a company for the purpose of setting up a builder and new home registry. It was the opinion of the Alberta Council of the Canadian Home Builders' Association that the Committee's views in the areas of registering builders and warranting homes were both an urgent and vital necessity. They felt the formation of a warranty program would:

1. forestall the arbitrary establishment by government of compulsory licensing of builders which would be a detriment to the industry;

2. rapidly and significantly increase the favour of public opinion of those builders who chose to become certified because they would be seen to be better serving the public; and

3. generally upgrade the practices of the industry in all aspects.

For a period of almost three years, the Committee met with consumer groups, the Alberta Department of Consumer Affairs and builders to solicit their views on the establishment of a warranty program and in June of 1964, a meeting was held with approximately 30 builders from around the Province to evaluate the findings and recommendations of the Committee.

The Committee's recommendation was to establish a non-profit home warranty company under the appropriate section (Section 17) of the Companies Act. The Company would be governed by a board of directors of builders appointed by the Alberta Council of the Canadian Home Builders' Association. The company would provide a system of builder registration which would be voluntary but would be seen as extremely advantageous to all reliable and bona fide builders. The elements governing membership in the proposed company were as follows:

1. The criteria for membership would be based on business integrity and financial stability.

2. Inexperienced builders would be provided with a probationary membership.

3. Once a builder was accepted for membership, he would sign agreements stating he would provide his customers with a new home warranty indicating his willingness to maintain the home for a period of one year against defects in workmanship and materials.

Finally, the Committee recommended that in the event of disputes with his customers, a builder member would agree to abide by the warranty company's arbitration authority.

The recommendations of the Committee were endorsed by all builders present and were forwarded to the Alberta Council of the Canadian Home Builders' Association in Edmonton and to the national association in Toronto for their information.

1.4 Canadian Home Builders Investigate a National Program

The findings and recommendations of the Alberta Steering Committee were discussed at great length at the annual National Builders' Conference in 1965. Following their presentation, Alberta builders were requested not to implement the report or any of the findings of the study until the national association had sufficient time to thoroughly examine them. As well, it was suggested by the national association that the proposals should be reviewed on a national level and input solicited from the Federal Minister responsible for Housing, the Federal Department of Consumer and Corporate Affairs and Central Mortgage and Housing Corporation.

Over the next two years the topic of new home warranty became a major issue of discussion at both national and provincial housing association meetings and in 1972, a report was prepared entitled "An Interim Report on Consumer Protection for New Home Buyers". This report contained the following recommendations:

1. an independent organization separate from the national builders' association should be established for the formation of a Builder Register;

2. a standard warranty for all Canadian builders should be established;

3. an inspection service should be provided for builders separate from CMHC;

4. builders should be responsible for all defects for a period of one year;

5. home buyers should be insured against non-performance of a builder; and

6. procedures for settling disputes should be established.

Following the tabling of this extensive report the Board of Directors of the Canadian Home Builders' Association authorized the hiring of the consulting firm of Urwick, Currie & Partners for the purpose of completing a study into the implementation of a warranty and insurance scheme for new home buyers in Canada.

In July of 1973, a report entitled "A Warranty and Insurance Protection Plan for New Home Buyers" was presented by Urwick, Currie and copies circulated to all interested parties including home builders' associations across Canada. The report identified home buyers, home builders, lenders and the government as parties of the new home purchase, all with varying interests and responsibilities.

Urwick, Currie & Partners reported that the purpose of the proposed plan was to ensure:

1. that agreed construction standards be met;

2. a warranty obligation be guaranteed;

3. deposits be protected;

4. complaints be handled quickly;

5. quality standards be maintained; and

6. housing research be fostered.

They further reported that these objectives could be achieved through:

1. builder registrations; and

2. new home certification.

1.5 Alberta Begins to Take the Initiative

Following the presentation of the report it became increasingly clear to the Alberta directors of the Canadian Home Builders' Association that a consensus to the final recommendations of the Urwick, Currie report would not be reached and further delays, because of political infighting, would result. The reasons for this were because:

1. many felt housing was a provincial responsibility and therefore warranty plans should be administered provincially and not nationally;

2. many felt the plans should be legislated and not voluntary;

3. many felt that some areas of the country would have larger claims per capita than others and, therefore, subsidies would have to be provided;

4. some felt only builders should be directors of the warranty company, while others felt all parties involved in housing should be eligible to become directors; and

5. an agreement as to the election and regional representation of the directors became a major issue.

Therefore, in the Spring of 1974, Alberta builders began to prepare the articles of association for a free enterprise, industry-run warranty company. The Committee that was established in March of 1974 was given the responsibility to have a company incorporated before year end and to have it functioning by March 1975.

The Committee accomplished these tasks and on November 14, 1974, the Company was legally incorporated and in February of 1975, homes began to be enrolled under the New Home Warranty Program of Alberta.

Alberta's initiative to proceed with its warranty program, independent of the national organization, prompted other provinces to proceed with the implementation of their own programs. By 1977, all regions and provinces in Canada had followed Alberta's lead and currently 750,000 homes in Canada have been enrolled under these warranty programs.

1.6 National Warranty Council Formed

During the 1977 national home builders' annual conference, the Alberta Warranty Program organized a meeting of Canada's seven programs for the purpose of establishing a National Warranty Council. The reasons presented by Alberta for the establishment of the Council were that it could:

1. be used as a facility for the exchange of information on dispute settlement procedures, quality standards, warranty documents, claim statistics and research;

2. advise and coordinate intake and output of information of a national nature which could be of value to all Warranty Programs;

3. enhance the public image of the residential construction industry in Canada; and

4. act as a reporting vehicle to the Canadian Home Builders' Association.

As a result of Alberta's initiative, the National Warranty Council still exists and is a major influence in the Canadian Home Builders' Association.

Warranty Programs in Canada have benefited because of Alberta's initiative. The Alberta Program will continue to implement new concepts to further advance consumer protection through the free enterprise system. Warranty Programs will also continue to succeed because Federal and Provincial Governments are committed to their aims and objectives.

In Alberta it has been demonstrated that a responsive industry can aid consumers and it is felt that industry self-regulation is superior to government regulation. In excess of 125,000 homes are covered by the Program and 500 Builders are currently registered. Since the inception of the Program, thousands of homeowners have been assisted and almost $2,000,000 has been paid to correct deficiencies in workmanship and material, refund lost deposits due to bankruptcy, insolvency or fraud and finally to repair major structural defects. This is, indeed, an enviable record and something all Albertans can be proud of.

2.0 WARRANTY PROGRAMS AROUND THE WORLD

2.1 Introduction

The New Home Warranty Program of Alberta has throughout its eleven years of operations been aware that a number of countries, notably the United Kingdom and the United States, have been providing a ten year major structural defect warranty. The United Kingdom has offered this coverage for approximately 30 years and the United States, since the incorporation of the Home Owners Warranty Corporation in 1976.

The Alberta Warranty Steering Committee was aware that the Urwick Currie and Partners Report on a Warranty and Insurance Protection Plan for new home buyers initially recommended a ten year warranty plan for Canadian new home purchasers. However, they ultimately recommended a five year plan with a one year workmanship and material defect warranty because their research into consumer complaints and housing problems indicated this was the time frame in which most problems they investigated had occurred.

It is useful to review warranty experience on a world-wide basis, including the attitudes of governments toward warranty programs, builder registration requirements and the various methods used to screen builders. Also, insurance and claim costs, methods of complaint handling, a statistical comparison of Canadian programs, as well as information on those in the United Kingdom and the United States will be reviewed.

2.2 Government Attitudes Toward Warranty Programs

In the United Kingdom, the Minister of Housing and Construction has frequently stated that he does not want to extend government intervention into housing and has allowed the Warranty Program and the National Home Builders' Council to initiate and control construction codes, standards and also to provide inspection services to assure compliance. The government strongly feels warranty programs can raise standards, weed out the incompetent and through industry sponsored educational programs, teach one another.

In the United States, the federal government's Federal Housing Authority (FHA), has continually supported industry self regulation and believe it is best for both the industry and their customers. They believe in the minimum of interference but have cautioned the industry not to be too slow in promoting and seeking the support of both consumers and builders. Through the past ten years, the Home Owner's Warranty Corporation (HOW), which is builder owned, has grown to be the largest of America's home warranty companies accounting for over 75% of all American homes covered by a warranty program. HOW has the full endorsement from FHA and all HOW standards of construction are accepted and approved by FHA.

In Ireland and the States of New South Wales and Victoria in Australia, warranty programs are also voluntary and not governed by any type of legislation.

In the other Australian States and in Holland, Warranty Programs are legislated. In Western Australia, a government system of builder registration, involving exams, has existed for over forty years. All applicant builders there have to pass an exam which covers areas of building codes, construction expertise, management and technical competence. Mr. Howey McCleod, Registrar of the Western Australian Program, reported at the recent International Housing and Home Warranty Conference that the system has and is working extremely well and is supported by builders and customers alike.

2.3 Builder Membership Criteria

In addition to screening builders for technical competence, all countries with insured warranty programs have introduced systems which ensure builders are financially secure before they are accepted for membership. Typically, trade, supplier and customer references are required. Financial statements of builders are also required as part of the screening process both at the time of acceptance in the Program and at annual renewals of a builder's membership.

Restrictions put on builders by various programs around the world include:

1. a cash deposit per home held for a period of up to three years as security by the program as protection in the case of default by the builder in his warranty obligations;

2. letters of credit in the amount of 5% of annual gross sales provided to the Program;

3. adequate working capital calculated on a construction activity formula;

4. limits on the number of dwellings which may be built;

5. limits on the number of units which may remain in unsold inventory; and/or

6. shareholders' personal guarantees.

In Alberta the following items may be required at time of registration or at a builder's annual renewal:

1. financial statements which are externally prepared on the minimum of a "Review" basis according to the standards set out by the Canadian Institute of Chartered Accountants, by a Chartered Accountant, a Certified General Accountant or a Certified Management Accountant in public practise;

2. guarantees of all shareholders (corporate and personal);

3. statements of financial worth of all shareholders;

4. a postponement of shareholder and/or affiliate company loans;

5. a signed "Agreement with Builder" which outlines the builder and the Program responsibilities during the term of the membership (included as Appendix E);

6. an activity report outlining the number of homes and their estimated values that the applicant plans to construct during his first year of membership. Also included is the estimated value of all other construction activity in progress or planned; and

7. a bank reference showing amounts of lines of credit, loans outstanding and contingent liabilities.

In addition to the above, developers of condominiums must provide:

1. a complete summary of each condominium project's estimated costs as well as the selling prices of all units;

2. a copy of the lender's mortgage commitment;

3. a copy of the marketing package;

4. verification of 'Course of Construction' and all risk insurance coverage;

5. verification of Performance and Labour and Material bonds;

6. verification of Soils tests; and

7. once the project is completed, a certificate of substantial completion certified by the Engineer or Architect.

2.4 Dispute Settlement Procedures

In the areas of dispute settlement through the process of either conciliation and/or arbitration, there are significant differences in their handling and legality. In the U.K., for example, there is no legal right to conciliation but their program offers an ex gratia service for purchasers and builders if disputes arise. The United Kingdom program handles about 10,000 cases annually of which 1,000 go through a formal technical and report writing process.

In the U.S., conciliation is a legal right with volunteer conciliators. In both the U.S. and U.K. if either party is unhappy with the conciliation process then a formal legal and binding process of arbitration by qualified and independent arbitrators is available. Awards generally are mostly monetary and include arbitration fees and losses payable by both parties.

In Canada, the conciliation complaint handling procedures have worked extremely well and in excess of 99% of all complaints have been settled through this process. In fact, in Alberta, the Court of Queen's Bench decision in the late 1970's ruled that the Warranty Program's conciliation process is a legal substitute for the Arbitration Act of the Province.

Upon review of the methods of complaint handling before reaching the conciliation stage, the following would generally apply throughout Canada, the U.K. and the U.S.

2.4.1 Preliminary Handling

1. In situations involving a telephone or personal inquiry with no previous correspondence to the builder or warranty program, the homeowner is advised:

   a) to write his builder outlining a list of complaint items and to retain a copy of the letter for future use; and

   b) that if no response is received from the builder within 15 days after the letter is mailed, to send a copy of the letter to the Program with a covering letter.

2. For telephone complaints where the homeowner has already written to the builder, the homeowner is requested to send the Program a copy of the original letter submitted to the builder with a covering letter.

3. For written homeowner complaints to an area office where there has been no previous written correspondence to the builder, the Program sends a complaint notification letter to the builder with a copy of the homeowner letter attached asking the builder to respond to the homeowner immediately.

2.4.2 Investigation

An investigation file is opened when the Program is in receipt of a copy of a letter to the builder with a covering letter from the homeowner indicating non-performance by the builder. The following steps are then taken:

1. The builder is visited by a Program inspector and the builder's intentions to repair the listed defects are documented.

2. A letter is written to advise the homeowner of the builder's intentions and to explain their right to conciliation. A copy of this letter is also sent to the builder.

3. If the performance date is passed and the builder has failed to correct the deficiencies, the formal process of conciliation commences.

2.4.3 Conciliation

1. A formal "Request for Conciliation" document is forwarded to the homeowner for his completion and signature.

2. Once the Program is in receipt of the Request form, a copy is forwarded to the builder.

3. The Program will then arrange a time which is convenient to all parties and an inspection is conducted.

4. Upon completion of the inspection, a formal report on the disputed items is written giving particulars of defects and a decision on whether the builder is required to repair the defects.

5. In Alberta's Program, the completed conciliation report is reviewed by the Manager of Operations to ensure continuity of interpretation of the Program's coverage. Once this is done, copies containing a decision on all items listed in the formal letter as being deficiencies is rendered to the homeowner and to the builder.

6. If any mortgage monies are being held back by the homeowner in lieu of repairs, these funds are placed in trust and will be available to the builder once he has completed the work as outlined in the conciliation report.

7. Once the builder has completed the repair of the defects an inspection is conducted by the Program. If repairs are acceptable to the Program, a letter is sent to the homeowner advising him that the requirements of the warranty have been met.

2.4.4 Claims

If the builder fails to respond to the Conciliator's Report for any reason the Warranty Program steps in immediately. From its list of approved contractors and sub-trades, an invitation to tender on repairs is distributed. Generally, at least three tenders are received and of these, one selected. A purchase order is issued within 14 days following default by the builder and work completed within 7 days of issue of purchase order. If the homeowner has held back funds in lieu of repairs, this money is used to pay for the repairs. If this amount is insufficient or if no monies were held back, the Program picks up 100% of the cost to repair the deficiency. (Some Programs have small deductibles.) Once work is completed, the homeowner signs a release acknowledging the work has been completed.

2.4.5 Summary

Evidence suggests that the dispute handling procedures described above are fair and equitable. From experience, in excess of 95% of claims have been successfully handled without lawyers or courts being involved. Selected warranty program officials around the world feel this is an admirable record compared to other industries. For the residential construction industry it is important that credibility is maintained and warranty programs continue to find fair and equitable solutions through the conciliation process. If this credibility is lost, purchasers could become disenchanted and builders disillusioned.

2.5 Program Comparisons

On the next four pages, this section compares warranty programs including their most common problem areas, coverage, and operating environment. Table 1 presents a comparison of claims in different jurisdictions. Table 2 lists some of the main features of the different programs. Table 3 gives some pertinent information about the housing markets in various jurisdictions, and Table 4 concludes the comparison by listing the coverage offered in the different programs.

To present an overview of this nature is difficult. For example, only Canadian warranty programs offer deposit protection to new home buyers. The term of warranty protection also varies from five to ten years. As well, some Programs offer full workmanship and material warranties for the full term of the warranty while others offer one or two years. The information presented in the following tables was primarily taken from the last International Housing and Warranty Conference.

TABLE 1

Claims Comparison for Warranty Programs in Different Jurisdictions

Jurisdiction	Major Problem Areas	Frequency per 1,000 Homes Enrolled	Average Cost Per Claim (Canadian $)
New South Wales (Australia)	Quality of workmanship	3.2	1,200
Victoria (Australia)	Code violations	4.3	800
Canada	Major Structural Defects(MSD)	14.3	1,800
Ireland	Soils - Foundations	12.6	3,000
U.S.A.	MSD - Quality of Workmanship	17.0	2,000
U.K.	Quality of Workmanship	4.8	1,200
	MSD	25.0	2,000
Alberta	Quality of Workmanship	1.3	1,250
British Columbia	MSD	12.3	2,500
Saskatchewan	Water/MSD	20	1,408
Manitoba	MSD	10.6	1,750
Ontario	Drywall/Windows	15	1,350
	MSD	20	2,000
Quebec	MSD	20	1,050
Atlantic	Foundations	8	1,200
	MSD	20	1,000

TABLE 2

HOME WARRANTY PROGRAM FEATURES COMPARED

	NSW(Aus)	Victoria(Aus)	Canada	Republic of Ireland	U.K.	U.S.A.
Number of units warrantied per annum	65,000	20,000	95,000	6,000	140-160,000	250-300,000
% of all units built for sale warranted annually	100%	90% plus	75%	50%	99.9%	25%
Term of warranty Available	7 years	6 years	5 years	6 years	10 years	10 years
Builders have the primary liability after two years.	No	No	No	Yes	No	No
Is the Program entirely voluntary or are builders required by statute to belong?	Statute	Statute	Voluntary, save Ontario	Voluntary	Voluntary	Voluntary
Is the Program Mainly Run by Builders?	Yes	Yes	Yes	Yes	Yes	Yes
Main causes of claims other than loss of deposit	Workmanship, contracts, damp, roofs	Non-completion, major defects, other defects	Foundations, deposits, flashings, condensation	Foundations	Subsidence, foundations, flat roofs, floors	Finishes, doors, windows, woods, foundations
Builders' problems in meeting standards	Supervision	Interpretation	Interpretation	Supervision	Interpretation Supervision Land	Supervision Skills Conditions
Average cost of repairs as a % of selling price	2.8	.7 to 1.1	2.0	-	2.8	2.0

TABLE 3

HOUSING MARKETS COMPARED

	NSW(Aus)	Victoria(Aus)	Canada	Republic of Ireland	U.K.	U.S.A.
Population	5m	3m	27m	3.35m	52m	218m
Total units built per annum	24,500	18,000	150-200,000	12,000	140-160,000	1.5m - 2.0m
Proportion of home ownership	65%	77%	65%	75%	54%	65%
Proportion of new houses sold to first time buyers	55%	50%	N/A	65%	42%	30%
Average price of new house	$28,600	$30,000	$65,000	$42,680	$45,320	$101,388
Average buyer's income	$11,000	$10,800	$20,000	$ 9,797	$13,843	$ 24,708
Current Mortgage interest rates	N/A	N/A	11 - 12%	14%	11.75%	10.71%
Average size of a new house	1,345ft^2	1,539ft^2	1,400ft^2	1,076ft^2	800ft^2	1,750ft^2
Man hours taken to build average house*	1,500hrs	833hrs	2,100hrs	1,100hrs	1,175hrs	1,760hrs

*Note: Figures as supplied, but may be suspect.
All amounts in Canadian Dollars.

TABLE 4

WARRANTY PROGRAM COVERAGE COMPARISONS

Province	Deposit Coverage		Single Family Warranty Coverage		Condominium Warranty Coverage		
	Single Family	Condo	First Year	M.S.D.*	First Year	M.S.D.	Common Property
Alberta	$ 5,000	$ Unlimited	$30,000	$30,000	$30,000	$30,000	$2,500,000
British Columbia	5,000	5,000	30,000	30,000	30,000	30,000	1,000,000
Saskatchewan	10,000	Not Offered	20,000	20,000	Not Offered	Not Offered	Not Offered
Manitoba	5,000	5,000	20,000	20,000	Value/Property	Value/Property	Not Offered
Ontario	20,000	20,000	20,000	20,000	20,000	20,000	1,000,000
Quebec	20,000	20,000	Selling Price	Selling Price	Selling Price	Selling Price	1,000,000
Atlantic Provinces	5,000	Not Offered	20,000	20,000	Not Offered	Not Offered	Not Offered
Great Britain	Not Offered	Not Offered	L50,000	L50,000	L50,000	L50,000	Not Offered
United States	Not Offered	Not Offered	Selling Price	Selling Price	Selling Price	Selling Price	Not Offered

*Major Structural Defect

2.6 How Programs Are Funded

In order to fund the operations of warranty programs in Canada and around the world, builders are required to pay an initial membership application registration fee, an annual renewal fee and a fee upon enrollment for the warranty of each home they build. Table 5 provides a summary of these fees:

TABLE 5 - Warranty Program Fees

Province/Country	Registration Fee	Renewal Fee	Enrollment Fee (average)
Alberta	$ 500	$200	$179
British Columbia	500	200	225
Saskatchewan	450	150	185
Manitoba	500	100	210
Ontario	500	200	350
Quebec	500	200	330
Atlantic	500	150	180
United States	750	350	475
United Kingdom	450	325	675
Ireland	500	125	425
Australia	1,000	300	425

*All fees are in Canadian Dollars

2.7 Builder Attitudes Toward Warranty Programs

One of the most interesting topics discussed at International Warranty Conferences, which are generally held every three years, is the issue of builder attitudes toward their warranty programs. Generally speaking, builders everywhere are staunch free enterprisers and resent any group or body which in any way infringes on their ability to conduct business. Even those Programs which operate totally independent of any government legislation or statute are subject to builder criticism of one sort or another. However, when one has time to discuss in detail with builders what warranty programs have accomplished through their short history and the advantages they provide to homebuyers, homeowners and builders themselves, most are pleased with how they are run.

In all countries, warranty programs are operated independent of government even through in some places legislation exists. In all countries, builders either make up the majority or at least half of the warranty programs' boards of directors. As a result of this, builders are aware that their interests are being represented. Based on the information available, builders around the world see the following advantages to their builder-operated warranty programs:

1. warranty programs facilitate the solving of consumer complaints;

2. they assist builders in dealing with lenders;

3. they add credibility to member companies;

4. they help to keep "fly-by-night" companies out of the industry;

5. they provide a vehicle for builders to recommend changes to various building codes (Britain, U.S.A. and Australia); and

6. they provide a lobby to the Government (Britain and Australia).

3.0 BUILDER AND CONSUMER SURVEYS

3.1 Introduction

In an effort to determine if existing homeowners and builders throughout Alberta were interested in an additional five years of major structural warranty coverage for their homes, a survey of approximately 3,000 homeowners and 500 registered builders was conducted in May and June of 1985 via a mailed questionnaire. These questionnaires, which were prepared in-house based on comments from a focus group, were also designed to examine the current perception of the public and builders toward the New Home Warranty Program, its purpose, role and its effectiveness as a part of the Alberta building industry. (These questionnaires are attached as Appendices G & H.)

3.2 Builder Survey Results

The primary purpose of the builder questionnaire was to evaluate the attitude of builders to the Program extending its existing major structural defect coverage for an additional five years. However, additional comments were solicited from discussions with builders at the time of their membership renewal and at local builder meetings.

In addition to conducting a survey of Alberta homeowners and builders, inquiries were also made of Canada's other warranty programs to investigate if they were considering any major changes to their warranty coverage, particularly with the term of warranty coverage.

The only Program to respond indicating they had considered an extention to their term of warranty protection was Saskatchewan. They advised that a small survey of homeowners and builders was conducted in 1984 but the Board decided the response was not positive enough to warrant a change. As well, difficulties in determining the additional risks involved could not be accurately projected because their claims experience in the first five years had not been extensively documented.

Builder's comments and attitudes taken from the survey can be summarized as follows:

1. Builders appear to be evenly divided on the Program's importance at the time the purchaser is deciding to buy the home.

2. In cases where complaints arise, a majority of builders felt the Program favoured the consumer.

3. They felt the Program should be advertised and promoted more to the public.

4. Buyers are not knowledgeable enough of the services offered by the Program.

5. Very few builders take time to explain their warranty and the coverage provided by the Program to the public.

6. Most builders support the Program's purpose of helping consumers with major problems and are prepared to pay the costs of those repairs to keep government regulations to a minimum.

7. Many builders are not knowledgeable about how the Program operates.

Builders see the Program's strengths in the areas of:

1. conciliation and dispute settlement;

2. informal opinions in some problem areas;

3. eliminating the need for holdbacks; and

4. keeping some unqualified individuals out of the industry.

With respect to the major questions on warranty extension asked in the survey:

1. Builders were approximately 2 to 1 in favour of extending the warranty to 10 years.

2. Some 38% of builders indicated they would offer the extended warranty as part of the marketing package, while the rest said they would explain that an additional period of warranty coverage was available and offer it as an option at the point of sale.

In the "Supplementary Questionnaire" concerning the availability of serviced lots, interim financing, mortgage insurance and mortgage loans, 90% of builders responding were not experiencing difficulties in any of these areas. As well, over 70% of builders felt that the current $5,000 deposit coverage was adequate.

Based on the survey findings, it appears that builders feel the Warranty Program is not a primary consideration at the time the consumer is purchasing the home. However, it becomes extremely important when a problem arises after the purchase particularly because consumers tend to become highly emotionally involved. The self-esteem of both the builder and the consumer are often called into question. In the case of the builder it is over his ability to produce a quality product and in the case of the purchaser over the fact that his investment is threatened.

3.3 Consumer Survey Results

The Consumer Survey was circulated in two stages, firstly to a group of 500 homeowners, whose homes at date of purchase were valued at less than $90,000 and secondly to 2,000 homeowners whose homes were valued between $90,000 and $120,000. Various target areas in Edmonton and Calgary were used to secure a good cross-section of homeowners.

The purpose of the questionnaire was to determine existing homeowners' awareness of the Program and whether they were prepared to purchase an additional five years of structural warranty protection.

There was a surprisingly high response to the questionnaire. Approximately two-thirds of the respondents offered comments concerning the Program. These comments can be summarized as follows:

1. Many made sure their builder was registered under the Program before purchasing their home.

2. Many were disappointed by the slowness with which their problems were dealt with by the builder.

3. Many were disappointed in the long time taken by the Program to handle their problems.

4. All of the problems commented on were clearly very important to the homeowners who had experienced them.

5. Many were unsure of their warranty, for example:
   a) what constituted a major defect;
   b) what constituted a major structural problem; or
   c) what constituted normal wear and tear requiring homeowner maintenance.

6. Some felt the Program favoured the builder.

7. Some felt the Program provided a poor explanation of their problems.

8. Knowledge of the Program features and coverage was lacking in many cases.

9. Their builders or real estate agents did not take sufficient time to explain the New Home Warranty Program.

10. Those homeowners who did go through the formal conciliation process felt all their problems were serious and therefore those items which were not favourably dealt with were perceived as being unfair. This is probably true from a builder's point of view as well. (From experience, approximately 60% of complaints dealt with through the conciliation process are judged in favour of the homeowner.)

A summary of the results of the major questions on the questionnaire are as follows:

1. Some 71% of the homeowners responding were aware their home was constructed by a registered builder and covered by the five year warranty.

2. Approximately 75% had used the services of the Program in one way or another to settle problems.

3. Regarding dispute settlement:

   a) 14% of the respondents said they were very pleased with the way the Program handled their problem;

   b) approximately 30% felt the Program assisted them in settling their problems but were a little disappointed;

   c) only 5% of the respondents felt the Program was of no use at all; and

   d) 51% had no comments regarding their involvement with the Program.

4. Fully 70% of respondents said they would be prepared to purchase an additional five years of structural warranty protection if it were offered.

5. Of the 289 respondents who indicated they would purchase the coverage:

   a) 44% chose the $150 premium with 0 deductible;

   b) 13% chose the $125 premium with a $250 deductible;

   c) 16% chose the $100 premium and the $500 deductible;

   d) 9% chose the $75 premium with the $1,000 deductible; and

   e) 18% chose the annual premium of $25 and the $1,000 deductible.

6. Some 60% of the respondents felt that a warranty would make their homes more marketable.

7. About 40% felt the warranty coverage added to the value of their homes.

From all of the voluntary comments received, it appears that Warranty Program played a very important part in the dispute settlement process even though not all parties were totally satisfied with the results. Further, homeowners are aware of the general guidelines of their warranty but are not knowledgeable of the details of their warranty or of the procedure to follow in making a complaint.

The survey showed that if builders want to significantly improve their reputations, speeding up the time in which they handle consumer complaints will definitely help them.

It seems clear that the majority of homeowners have had a reasonably positive experience with their builders and the Program and as outlined at the beginning of this paper, the negative image of the building industry evolves from a relatively small number of new home buyers. The emotional involvement in the home buying process leads many buyers to over-emphasize many problems which may occur. This may be part of the negative image some individuals have of builders and other building trades.

Senior Program staff believe that a continual monitoring of complaint handling procedures, particularly written communication, is required to ensure that problems are dealt with fairly and equitably and in the least time possible. Complainants should be told up front how long they have to wait for a response to their problems and every step necessary taken to ensure the problems are dealt with within that time frame. This will reduce some of the emotional aspects of the consumer complaint procedure.

4.0 INSURANCE

4.1 Insuring Alternatives

Since the inception of the New Home Warranty Program of Alberta in 1974, the Program has had a very positive relationship with its brokers, Reed Stenhouse Co. Ltd. and its primary insurer, Scottish & York Company. Through Reed Stenhouse and Scottish & York, the Warranty Program was able to develop a novel insurance treaty which was unique to the Canadian insurance industry. This arrangement was necessary because new home warranties were totally new in the Canadian insurance industry and no actuarial experience could be drawn from except that of the U.K. where in the first ten years of their operation, their claims could be classified as catastrophic.

Since 1974, the New Home Warranty Program of Alberta has had two insuring agreements with Scottish & York whose main points will be briefly summarized below.

From November 1974 to December 31, 1980, the Program's system of insurance could be best described as a "Retrospective Rating" system with a very small degree of self assumption. Under this concept, the Program prepaid a premium of $25,000 to its insurer and thereafter an additional premium of $25 per home enrolled payable on a cumulative basis on the last day of each month. This agreement also had a clause which allowed for a premium adjustment to the insurer for any of the following reasons:

1. The rate of premium could be increased in the event that the total of claims incurred (paid and outstanding net of recoveries) by the insurers during the period of inception date of the insurance (not to exceed five years) exceeded fifty percent (50%) of the pro rata earned premium for the same period. The premium adjustment increase on a per home basis would be the amount required if applied retroactively to the total number of homes enrolled during the period in order to reduce the loss ratio to fifty percent (50%).

2. At the third anniversary date of the insurance agreement and at each subsequent anniversary date after the third, if the loss ratio outlined was less than 50% calculated over the same period then the insurer would refund to the Program the sum of money equal to the balance remaining after deduction of the claims incurred as outlined from 50% of the earned premium for the same period.

The original insuring agreement contained terms under which the policy could be cancelled but generally speaking and for simplification, the policy could not be cancelled unless claims exceeded 67% of earned premium for any given one year period. Also the policy was automatically renewed on an annual basis if claims were 33% or less of earned premiums.

After five years of operation with an excellent claims record, the Warranty Program embarked upon a thorough examination of insuring alternatives to see if a more financially advantageous arrangement could be found. Upon review of the original agreement the following areas were identifed as areas in which senior staff felt improvements could be made:

1. The $25 premium was identified as excessive especially since the pattern of claims throughout the five year period was less than the 33% loss ratio to earned premium formula used to automatically renew the contract on an annual basis.

2. The approval of claims over $2,000 by an independent adjuster in some instances negatively affected the delivery time in responding to homeowners claims.

3. The monthly reporting process on claims paid was costly and seemed unnecessary particularly when claims were less than the 33% formula.

4. Over the five year period the insurers had accumulated approximately $1,000,000 in unearned premium and because the insuring agreement did not contain a provision for distribution of interest income earned on these funds, the Program did not receive any benefit.

As a result of these items, as well as other considerations, the Program began to investigate, evaluate and analyze possible alternative insurance arrangements. In summary, the possible alternatives which at that time were given consideration consisted of the following.

1. In view of the Program's excellent claims experience, simply renegotiate with the insurers for a rate decrease in the insurance contract.

2. The current contract could be modified to provide for a lower insurer retention than the current 37 1/2% and provide for premium adjustments based on paid losses rather than incurred losses. In this alternative, a sliding retention scale could be used where the retention percentage of 37 1/2 is reduced as the premium volume increases. This would provide the Program with a lower minimum premium than was being experienced. The maximum premium per home could be increased to provide the underwriters an additional inducement for lowering the minimum premium. The additional risk to the Program would have been nominal in view of past losses.

3. A variation of (2) above would be to have a flat insurer retention with premium adjustments based on paid claims rather than incurred losses.

4. A cumulative retrospective rating plan was another possible alternative. Under this plan, an initial "standard" premium is paid to the insurers. A retrospective premium is calculated at the end of the adjustment period. This retrospective premium is cumulative and is calculated as the (Sum of Incurred Losses + Sum of Annual Retentions) - (Sum of Loss Experience Credits).

   If the cumulative retrospective premium exceeds the total premium paid, then the Program will be charged an additional premium of 25% of such excess. If the cumulative retrospective premium is less than the total premium paid, then the premium charged the Program will be reduced by 25% of such difference. The terms of this plan were flexible and could have been negotiated annually with insurers.

5. An insurance subsidiary could be investigated either on-shore (Alberta) or off-shore (such as Bermuda/Nassau). In this situation, the insurance subsidiary could act as a direct insurer of the Program or as a reinsurer of a fronting domestic carrier. The general advantages of an insurance subsidiary included such items as: reduced insurance costs through direct access to reinsurance markets, improved cash flow, funding for future losses, additional perils could be covered. (An insurance subsidiary was not seen as viable for the Program due to political, legal, and economic reasons. However, it was worthy of consideration at the time of the initial analysis.)

6. The Program could choose to retain all of the risk and use insurers only for protection against large annual aggregate losses at a level which can be predetermined by the Program. An obstacle to this approach is that the Program could be deemed an unlicensed insurance company.

7. Another possibility which required research and investigation was a Trust Fund. In theory, the Program would set up an interest bearing Trust Account into which the insurance premiums would be funneled and out of which claims would be paid.

8. A "loss divisor" plan is a method where the premiums payable are based on losses incurred divided by a fixed percent subject to a maximum and a minimum premium. The divisor is usually an amount which takes into account the insurer retention but is a function of losses and not "standard" premium. For example, a loss divisor of 80%, or .80, would indicate that for each $1 in claims, $1.25 could be charged (1 - .8); the .25 would be the insurer retention.

Once all the insuring alternatives were identified, the Program felt that before it could embark on any one of them or a blend of a few, a thorough examination must be made of the cost and severity of future losses and the Program's ability to fund these losses.

4.2 Risk Analysis

To assist in this research, the firm of Reed Risk Management International was engaged and the wheels set in motion for another major innovation in the realm of home warranty protection.

In order to accurately estimate the cost of future claims, a thorough review of past claims which included an estimate of pending claims not yet paid by the Program was conducted.

These claims were divided into two major categories of warranty and major structural claims plus deposits. Estimates of incurred but not reported claims were also calculated to provide a greater confidence level for the projections. It was also recognized that a number of other variables such as the Canadian and Alberta economy, standards for Program membership, and consumer education could affect claims experience in the future. It was, therefore, determined that three levels of claims would be presented, namely optimstic, pessimistic and most likely levels. Some key assumptions upon which our projections were based included:

1. For the upcoming five years, the number of warranties issued were assumed to be consistent.

2. For the optimistic and most likely cases, the frequency of claims remained constant while in the pessimistic case, the frequency was increased by 15% in 1981, 100% in 1982 and then decreased by 35% in 1983 and 22% in 1984.

3. The pessimistic model assumed in 1982 an unknown event would trigger a large number of claims followed by a recovery in the succeeding two years.

The projection arrived at, therefore, for the five year period based on simulated annual aggregate claims were as follows:

	Aggregate	90% Confidence Range
Optimistic	$138,472	$ 89,000 - $189,000
Most Likely	177,000	126,000 - 233,000
Pessimistic	369,600	277,530 - 470,000

With a 90% confidence level being arrived at showing the minimum and maximum levels of expectancy for warranty claims, the Program determined that its claims reserves and projected budget revenue for the insurance fund could meet expected claims costs. Therefore, it began to seriously examine its insurance alternatives. After lengthy discussions with its consultants, Reed Risk Management, its primary insurers, Scottish & York and its brokers, Reed Stenhouse Company Limited, an insurance treaty with a high degree of self assumption while still maintaining the retrospective concepts of the previous agreement was agreed upon.

Under the agreement, the Program would assume an aggregate deductible of $7.25 per average number of homes enrolled over the five year warranty period and as a result insurance premiums were reduced from $25 per home under the original agreement to $3.70 per home under the new agreement.

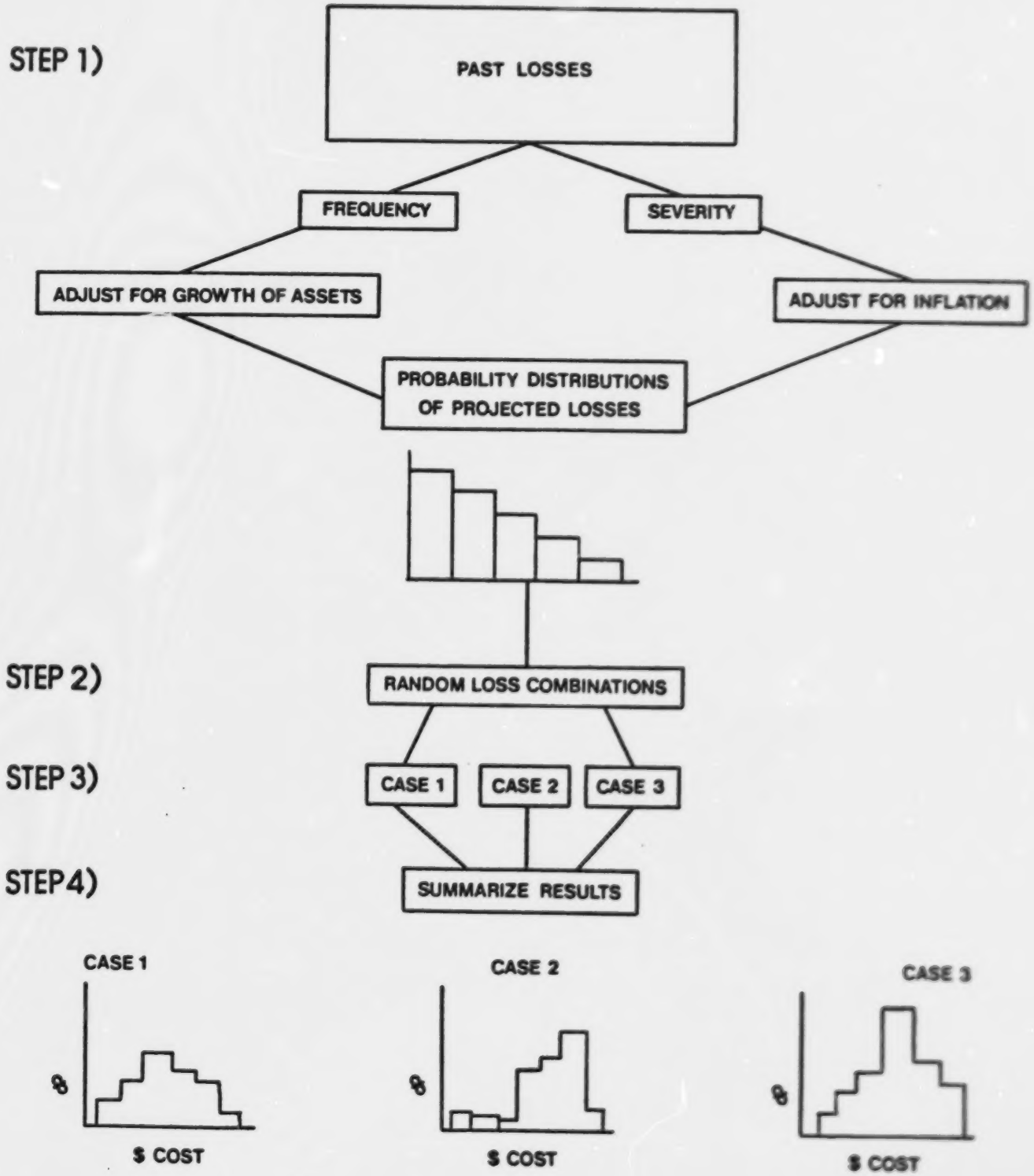
If the projected aggregate warranty claims analysis prepared in the initial Reed risk report (which projected a most likely warranty claims average of $177,000 over the five year period and a 90% most likely confidence level between $126,000 and $233,000 annually) is compared to the claims actually paid, it looks like this:

1980 -	$230,000
1981 -	319,000
1982 -	152,000
1983 -	102,000
1984 -	90,000
Total	$ 993,000
Five Year Average -	$178,000

It is believed that the assumptions used in the initital analysis have proven accurate. These assumptions plus additional data and experience gained since the original analysis conducted in 1979 and 1980 were incorporated to arrive at the most likely warranty claims for the extended warranty.

In determining the model for projecting first year warranty claims, three basic facts in the evaluation, namely past losses, frequency of claims per number of warranties in place, and the severity (average cost per claim in the period), were used. If these items are combined to form a simulated logic diagram or matrix to project the future from severity and frequency in the past, it would create the simulation shown in figure 1, page 29.

FIGURE 1: SIMULATION LOGIC DIAGRAM



This simulation has worked extremely well and even though claims have fluctuated from less than $100 to the maximum coverage of $30,000, average claims have been within projections.

In projecting major structural warranty claims for years six through ten, there is little or no experience to draw upon because of the previous five year limit. Even the claims severity under the existing coverage has been extremely limited with less than 40 cases which would qualify under the proposed extension. From 1980 to July 31, 1985, average major structural defect claims on an annual aggregate basis ('severity') have ranged from $1,490 to a high of $5,678.

However, based on the limited data available for the sixth to tenth year of the warranty period, it is the considered opinion of senior Program staff that the occurrence of major structural defects after the fifth year should not exceed .667% of that experienced during years two through five of each warranty generation. Because senior staff review all claim profiles on a monthly basis, it should be easy to adjust for any reserving requirements needed to guarantee the availability of adequate funds for payment of future losses.

4.3 Premium Options

As an offering of an additional five years of major structural warranty is new to the Canadian home warranty scene there is no premium actuary experience to draw from to calculate the premium the Program will require to fund losses. It is also difficult to determine the number of existing homeowners who would opt for the additional coverage as their homes come off warranty if they had the option. It is easier to predict the number of units which will carry the coverage from enrollment date or at the time of sale/purchase/possession of the home.

Upon examination of the options available for establishing a premium, it was felt there were two viable alternatives:

a) A single premium five year extension covering years 6 to 10 which would be purchased by the builder at the initial enrollment date of the home or purchased by the homeowner immediately upon possession of their newly built home.

b) An annual premium, which would be offered to the homeowner as his home approaches the end of its fifth year and so long as coverage has been in force continuously toward the end of each year thereafter.

Option #1 - Single Premium Five Year Extension:

The main advantages of this option to the Program are:
- low marketing costs;
- should be comparatively easy to sell;
- little or no selection against the Program; and
- claims should be lower than the annual premiums collected.

1. Low Marketing Cost - Unlike annual premiums the single premium option would only need to be sold once. This could be accomplished either as an option to the builder at the enrollment date of the home and added to his original cost and offered as a marketing tool or else purchased by his customer at the date of purchase of the home. Two existing Program documents, namely the "New ome H Enrollment Form" and the "Certificate of Possession and Warranty" could be amended to identify the home and provide the acknowledgement that the additional five year option had been purchased or declined.

   a) To ensure clarity of interpretation it may be in the best interest of the Program to amend its Certificate of Completion and Warranty to contain the following:

	Check One
i) The Builder has prepaid the premium for the five years extra warranty coverage against major structural defects.	____
ii) As the purchaser of this new home, I wish to purchase the extra five years of warranty against major structural defects and enclose my $ cheque to cover the premium payable.	____
iii) As the purchaser of this new home I do not wish to purchase the additional five year structural warranty coverage against major structural defects. I understand I or any subsequent purchasers of my home will not have another opportunity to buy this extended warranty coverage.	____

Builder signature _____ Date _____

Purchaser signature _____ Date _____

   b) Administratively, the Program would need to (i) issue a supplementary warranty certificate to those who buy the extra coverage (this could take the form of an adhesive sticker, to be attached to the original warranty certification); (ii) keep a he record for ten years of those who have purchased; and (iii) keep t returned Certificate of Possessionf a & Warranty forms (or, where no form is returned, he proof of delivery o follow-up letter) for those who decide not to buy t extra coverage. Costs would be low because of the minimum administration.

2. Easy to sell - Someone who has just bought his home is likely to be more interested in extra coverage than someone who has already lived in that home for nearly five years without any problems. For this reason, the single-premium five year extension will probably be easier to sell than the annual option.

3. Minimizes selection against the Program - Most people buying a newly-built home have no way of telling whether it is built well or badly. After five years in that home, however, they may well have additional information. For example, the house next door might have developed problems, their own house might be showing signs of movement, or some new technique used in the construction of their home may have attracted adverse media comment. Because of this, it is likely that annual coverage, which is sold after the homeowner has had an opportunity to get to know his house, would produce more claims than the single premium option. With the single premium option, the only likely selection against the Program is that some people are always more likely to buy insurance (and to make claims) than others. The Program recognizes it would be faced with this type of selection whatever the option. However, so long as there is good market penetration, it should not, in any case, be a problem.

4. Lower claims - Quite apart from adverse selection, fewer claims could be expected with single premium coverage purchased soon after possession. Unlike annual premiums where people are reminded each year that they have the coverage, it can be expected some people would forget that they paid a premium five or more years before. If something really serious happens the Program is likely to get a claim whichever type of coverage is involved, but there should be significantly fewer marginal or invalid claims with single premium coverage than with the annual premium method.

The main disadvantages of the single premium option are:
- high claims risk;
- inflation/investment risk; and
- possible tax problems for the Program.

1. High claims risk - Even if the Program knew what claims to expect from Alberta homes which are currently 6 to 10 years old, it would still be an area of high risk. Current claims are not necessarily a positive guide to what will happen in the early and mid-1990s. The U.K. Program, which has been providing 10-year major defect coverage for nearly 20 years and which had apparently achieved a stable level of claims by the late 1970s, has

seen the number of claims increase by 50% in the last three years. The main reasons for this type of instability are clear. These are:

a) New construction techniques can produce new types of problems. The current vogue in Canada for Super Energy Efficient houses is a good example for it is unknown what problems R2000 homes will experience in their ninth or tenth year.

b) Court judgements can change the interpretation of the policy wording. In the U.K., for example, claims for leaking flat roofs were routinely denied on the basis that they were not major structural defects. A series of Court judgements in the late 1970s over-turned this view and flat roofs now account for about 40% of all major defect claims accepted by the U.K. Program.

c) Increasing consumer (and media) awareness of warranty program makes it more likely that people will claim for marginal defects. If homeowners are regularly reminded by TV and newspapers that there is a warranty program, they are more likely to try a claim. The more people make claims, the higher is the risk that someone will take the Program to court and eventually win.

Against this background, the risk of the single premium option is obvious. The next issue is what premium to charge. The Program will not get its first claims until 1990 or 1991, and it will not know whether the premium is adequate until 1992 or 1993 at the earliest. If, in 1993, it discovers that the premium was too low, it will increase the premium, but there is nothing that can be done about all the homes covered between 1985 to 1993. Even if the premium still looks adequate in 1993, there is no guarantee that one or more of the problems previously discussed will not make it look thoroughly inadequate by, say, 1998.

The crucial point to bear in mind is that at any one time the Program will always have nine or ten years' worth of houses at risk - houses where premiums have already been taken and are committed for coverage. There is no easy solution to this problem of high claims risk. The three main possibilities, none very satisfactory, are:

a) reserve the right to charge an extra premium at the start of year six, if claim trends have been unsatisfactory. This would help to limit risk, but would (i) make the extra coverage harder to sell in the first place, and (ii) increase the selection against the Program. The people who pay the extra premium to keep the coverage in force will be those who are most likely to make a claim;

b) surcharge later generations to make up the shortfall on earlier ones; or

c) set premiums high enough originally to offset any possible detrimental effects.

2. Inflation/investment risk - The Program will be paying claims and incurring administrative costs at the prices which prevail in the 1990's from revenue generated in the 1980's. In theory, this should not be a problem. The Program would invest premiums received today and reinvest the interest earned by that premium until the money is needed to pay claims. So long as the investment return roughly equals the rate of inflation, and so long as the initial premium is about right, the Program should end up with enough money to pay claims.

   In practice, however, there are dangers. Apart from tax problems, which are dealt with later, the main ones are:

   a) The Program may be tempted to use the interest to subsidize current operating costs. If this was done, it would leave the Program vulnerable to future inflation.

   b) Although inflation and investment return tend to be about the same over the long term, they can be markedly different in the short run. This is particularly true when the rate of inflation is changing sharply. When inflation rises, investment returns rise more slowly and the Program can easily end up with a negative real return. When inflation falls, as in the last couple of years, investment returns fall more slowly and allow the Program to earn substantial positive real returns. Starting the extended major defects coverage at a time when inflation is rather low means that there is a risk that it will later rise again so the Program should expect a period of negative real returns at some point in the next ten to fifteen years.

   c) Building repair costs do not necessarily move in step with inflation, at least in the short term. If demand for a particular type of repair work increased sharply, companies engaged in remedial work would tend to raise their prices very sharply. Even if investment performance has kept pace with general inflation, shortfalls could result.

3. Tax problems - With the single premium option, the Program's reserves would increase very sharply.

Revenue Canada will be concerned with this increase in reserves and the associated sharp increase in investment income. In particular they may attempt either of the following actions:

a) Tax the investment income. Revenue Canada is apparently very sensitive about investment income of non-profit organizations; and/or

b) Request justification of the level of reserves and, if unhappy with the Program's explanations, may tax that part of the reserves which is considered unnecessary. In essence, this is what Revenue Canada tried to do in Manitoba recently.

Either of these reactions by Revenue Canada would be potentially very serious. If investment income is taxed, the Program would not be able to match inflation.

If the premiums themselves were taxed, the problems could be even worse: some investment income would be lost. It, therefore, may be prudent to contact Revenue Canada via the Program's auditors to get a "no name" ruling on the matter.

Option #2 - Annual Premium:

With this option, homeowners would be offered one extra year's coverage towards the end of their fifth year. Those who bought would be offered another year's coverage at the end of the sixth year, the seventh year, and so on. Once the coverage has been allowed to lapse, however, it could not be reinstated. If the Program allowed people to opt out for a few years and then opt back in, it would suffer unacceptable selection against itself.

The main advantages of this option to the Program are:
- it offers low risk;
- enrollment procedures provide a definite end to first five years of warranty coverage; and
- it could in theory continue indefinitely (even past five additional years).

1. Low risk - None of the risks outlined in the single premium option are really a problem with annual coverage:

   a) So long as proper records are kept and monitored with reasonable care, the Program can rapidly see if premiums are inadequate and take appropriate action. Consequently, the possibility of substantial loss is comparatively small.

b) Premiums can be adjusted annually to compensate for inflation. Investment income is largely irrelevant and can be effectively utilized.

c) Tax problems are less likely to arise and are easily resolved. With an annual premium it is comparatively easy to quantify profit or loss.

2. Enrollment Procedures - An invitation to buy the additional warranty protection would be sent to the homeowner three months before the end of the fifth year. (See draft, Appendix F.) For those who do not buy the coverage the letter will still make it easier for the Program to resist late claims. To succeed in a claim, the homeowner will have to explain (a) why he ignored the Program's letter warning him that his five years were nearly over, and (b) why he elected not to buy the continuing coverage as he was aware of problems in his house. Although the claimant may have a reasonable answer to both questions, the Program's moral position (particularly in any media discussion) will be comparatively strong.

3. Could continue indefinitely - So long as coverage is continuous, annual coverage need not end when a home is 10 years old. In theory, it could continue for 20 to 30 years or even more. In practice, it may be found that claims on older homes are so expensive that no one is willing to pay the premium. Nevertheless, there is no great risk in continuing to offer the coverage each year, if necessary at an increasing premium, while experience is gained. If, in the long run, it proves viable to offer annual coverage for homes up to, say, 20 years old, the Program could gradually build up a portfolio of perhaps 10,000 owners buying each year. Such a portfolio could be at least as profitable as the single premium option, but with virtually none of the risk.

The main disadvantages of annual coverage are essentially the reverse of the single premium option's advantages:
- comparatively high marketing costs;
- harder to sell; and
- some selection against the Program.

1. High marketing costs - Annual premiums are expensive to sell. Unlike a single premium, where the Program can combine the offer with the warranty certificate, it has to make a special effort to identify homes which are nearing the end of their fifth or subsequent years. It also entails a much more complicated administrative job keeping track of who has bought the extra coverage, and it will probably end up having to deal with more correspondence.

If annual coverage proved relatively popular - say 30% take-up or better - within 4 or 5 years the Program would have to employ a full-time person to handle the operation. It would also need a micro-computer devoted very largely to this part of its activities, and although a manual system would be possible, it would not be cost-effective if there were more than 2,000 to 3,000 policies being renewed each year.

2. Harder to sell, and selection against Program - The other two disadvantages of annual coverage are closely allied. It will clearly be harder to sell one year's extra coverage to someone who has already lived in their home for five years without problems than to sell five year's extra coverage to someone who has only just bought a home. Yet the Program must achieve a reasonable level of acceptance if annual coverage is to be viable. Without it, the selection against it would be unacceptable.

   For example, suppose that there are expected to be three valid major defect claims a year, at an average cost of $2,500 each, for every 1,000 homes which are at risk. If all 1,000 homeowners buy the coverage, claims will cost $7,500, i.e. $7.50 a policy. If only 300 people buy the coverage, it is fairly certain the Program would still get all three claims - i.e. still $7,500, but now $25 a policy. If only 50 people buy the coverage, it would still expect at least two valid claims - $5,000, but now $100 a policy. The Program must bear in mind that this coverage is being offered to people who know more about their homes than the Program does, so it would get not only the litigious minority but also the ones who have reason to expect problems.

   Although it is impossible to make firm rules, the probability is that if the Program cannot persuade at least 30% of homeowners to buy annual coverage, the product will not be viable. If acceptance is 30% or better, there is a potentially viable product.

   Finally, if the initial response is promising - say 30% to 40% - but it becomes clear during the first year that claims are much higher than expected, it can effectively terminate the experiment by putting the premium up dramatically at first renewal with a covering letter explaining, apologetically, that claims have been very heavy.

In summary of this option, we can see that the annual premium concept needs a lot of administration and could be difficult to sell.

5.0 FINAL ANALYSIS

5.1 Costs

There are three main costs associated with extending major structural defect coverage:

a) paying for repairs when a claim is valid;
b) claims administration; and
c) marketing and record-keeping.

1. Paying valid claims - There are only two certainties:
   a) no one knows what the actual claims experience will be in Alberta; and
   b) if the Single Premium option is chosen, the penalties for underestimating claims are potentially very severe.

Internationally, most of the best experience of what happens after the fifth year comes from the U.K. Program, which has been providing 10-year cover since 1965. The French Decennial Program has been going even longer, but is conceptually so different from the Alberta Program that its experience is virtually useless (it includes, for example, offices and industrial buildings). The Dutch Program is very small and only six years old. The American HOW Program is now into its tenth year, but the problems experienced in the late 1970s (poor builder selection, over-generous claims handling, major soil problems in one of the biggest States) make their data very suspect. HOW was actually recording about 15 times the Alberta major defects frequency by 1980/81.

For practical purposes, the U.K. experience is, therefore, the only real quide we have. For major defects, the typical U.K. picture is as follows:

TABLE 6: U.K. MAJOR DEFECTS EXPERIENCE

Period from possession of home to claim being accepted as valid	Number of claims in period, per 1,000 homes at risk	
12 months or less	0.02)	U.K. has 2 year initial
13 to 24 months	0.06)	guarantee period, rather
25 to 36 months	0.40)	than Alberta's one year
37 to 48 months	0.95	
49 to 60 months	1.40	
61 to 72 months	1.75	
73 to 84 months	1.95	
85 to 96 months	2.20	
97 to 108 months	2.45	*reported within 10 years
109 to 120 months	2.25	but not accepted as
over 120 months	1.50*	valid until later

Two main points are worth noting:

a) Even allowing for the fact that some of the claims accepted in the sixth year would have been reported in the fifth year, only about 3 1/2 claims per 1,000 homes - less than 25% of the total - are reported in the first five years after possession.

b) the frequency of major defects increases as homes get older.

Canadian experience in the first five years is difficult to interpret because the small number of homes involved mean that just a few claims can make a big difference. There also seems to be substantial inter-Provincial differences in Canada, perhaps reflecting different attitudes to claims as well as genuine differences in construction standards. Overall, however, Canadian experience in the first five years is not dramatically different from that of the U.K.

TABLE 7: Estimated Major Defect Claims

	Estimated number of major defect claims in first five years after possession, per 1,000 homes at risk	Does frequency increase with age of home?
Saskatchewan	3 1/4	No clear trend
Alberta	1/2 to 1	Yes, though less than U.K.
British Columbia	8 to 10	Yes
Manitoba	1 1/2	No clear trend
Ontario	2	Yes, though less than U.K.
Quebec	9	Yes, though some technical problems with the figures.
All six Provinces, weighted by number of enrollments	3 1/4	Yes, though less than U.K.

The weighted average of the six Provinces come out very close to the U.K.

The fact that the claims frequency appears to increase more slowly than in U.K. is encouraging, but must be treated with caution in view of the small number of Canadian homes which have completed five years of warranty.

Canadian major defect claims in the first five years are much like the U.K. claims.

U.K. claims are much higher in the second five years than in the first five. There is evidence to suggest that this aging effect will not occur in Canada.

At 1985 prices, a typical Alberta major defect claim costs about $4,500.

2. Claims administration costs - There are two points to note here:

   a) Actually dealing with claims - inspecting the home, occasionally employing technical experts, deciding what repairs are needed and handling the routine administration - is surprisingly costly.

   b) As well as the valid claims, the Program will have to deal with a lot of invalid claims and with sundry miscellaneous enquiries. It will also, at some point, have to defend in court its decision to reject a claim.

   Trying to estimate the cost of handling a claim by adding up to the component parts of the process usually seems to produce an answer which is substantially too low. A better approach is to split the Program's total expenditure in a year into three parts - claims related activities, inspection/conciliations/enquiries, and other activities - and then estimate the cost per claim by dividing the total spent on claims by the number of claims handled. Using this approach produces estimated costs per valid claim of $2,500.

   Using a similar technique, the cost of invalid claims can be estimated by dividing the total time spent on inspections/conciliations/enquiries by the number of inspections/conciliations carried out in the year (this implicitly assumes that the ratio of enquiries to inspections/conciliations is roughly constant). Doing this produces an estimated cost per invalid claim of approximately $500.

   Cost implications: U.K. experience, which is broadly supported by Canadian experience, is that about 50% of major defect claims are valid i.e. for every valid claim, you get another claim which is rejected.

3. Marketing and record-keeping costs: The single premium option should be quite reasonable. Even allowing for a recorded delivery letter, costs should not be more than about $5 a home.

5.2 Additional Considerations

Four other points which should be considered before introducing extended major defect coverage are:

a) policy wording;

b) maximum coverage;

c) a deductible/investigation deposit; and

d) whether the Program should be an insurance company.

1. Policy wording - To avoid confusion, it is suggested that the extended coverage be identical with the major defect coverage currently provided in the first five years.

2. Maximum coverage - The current limit of $30,000 is worth less than it was 5 years ago. In ten years time, it could be worth only a quarter what it was originally.

   There are a number of possible ways of dealing with this. The Program could:

   a) have a higher limit for the second five years - say $40,000;

   b) index-link the coverage for the second five years, using a constant base date such as October 1985 in order to avoid multiplicity of limits. Therefore, the coverage in the second five years would be ($30,000) X (consumer price index at date of claim + consumer price index at October 1985). If you wanted to be cautious, you could set a maximum inflation limit as used in the U.K.;

   c) have pre-set limits of $35,000 in years 6 and 7, $40,000 in years 8 and 9, $45,000 in year 10;

   d) tie the limit to the basic warranty, i.e. whatever the limit was for new homes at the date of claim would be the limit also for an extended policy; or

   e) leave the limit at $30,000 and hope no one considers it inadequate.

   Financially, it makes little difference where the limit is set. Most claims are quite small, so the limit is really only there to protect the Program against the occasional disaster. Quebec, which has a limit of the original selling price of the home, actually has one of the lowest average claim costs in Canada. The U.K., which covers the original selling price increased in line with inflation, has an average cost not much above that in Canada.

One possibility to be considered would be to give people who buy the extra coverage a higher maximum in their first five years as well. People who pay the premium get not only five extra years coverage but also a limit of, say, $40,000 instead of $30,000 in the first five years.

3. Deductible/investigation deposit - There is much to be said for having either a deductible (for example, the purchaser pays the first $250 of any claim) or an investigation deposit. The homeowner has to send in, say, $100 when he makes a claim. He gets the money back if the claim is valid or if it was reasonable for him to have made it, or both.

   There is no doubt that an investigation deposit reduces the number of small claims. When Ontario removed its requirement for a $50 deposit in the late 1970s, claims doubled, and when it reimposed the requirement a year later, claims halved. The average cost of the extra claims in the year when there was no deposit was less than $200.

   The effect of a deductible is less dramatic unless it is quite large. Quebec has just raised its deductible from $50 to $250 in an effort to get rid of some of its small claims. Nevertheless, a deductible can be helpful in limiting claims, particularly if, as in the U.K., it is expressed as a proportion of claim cost. For example, the homeowner pays 10% of the cost of any claim, with a minimum deductible of $250. This tends to discourage homeowners from seeking overly-elaborate solutions to their problems.

   In summary, because of the high cost of investigating invalid claims the Program should certainly try to discourage marginal claimants. One of the simplest methods is to have an investigation deposit and a deductible of the same amount. The homeowner has to send in $100 before the Program would investigate, knowing that (a) if the claim is valid, the $100 would be allocated towards the repair cost, while (b) if it is not valid, the Program may keep the $100 to offset administrative costs (though in practise the Program usually returns the money in the interests of good public relations). A variation on this theme is to have a deductible/investigation deposit which increases as the home gets older - say, $100 in year 6, $150 in year 7, $200 in year 8, $250 in year 9 and $300 in year 10. Such a solution, however, is a little complicated and may place too much emphasis on this aspect and thus discourage potential purchasers.

Whatever is finally decided, it is obviously more important to try to discourage marginal claimants if the Program decides on the annual premium option (where it can be expected that a lot of people will try to claim) than if it opts for a single premium (where the Program expects a lower level of claims in any case).

4. Would the Program be an insurance company? - Finally, it is worth considering whether extending the major defect coverage could technically make the Program an insurance company, instead of the non-profit corporation status it now enjoys.

   Warranties are a rather grey area of the law. At the moment, the Program is acting primarily as a guarantor for the builders' liabilities, which arguably is not insurance (though it is worth noting that a recent Government-commissioned report in Quebec has recommended that the Quebec Program should come under the auspices of the Superintendent of Insurance).

   Once the Program states it is selling extra coverage directly to the public, however, it will be acting in a manner much more obviously akin to insurance. Before it actually launches an extended warranty, it would be wise to discuss the plans with the Provincial Consumer Affairs Department and, if necessary, with the Superintendent of Insurance. So long as they have an opportunity to comment in advance on the plans, they will probably be very helpful. If, however, the Program proceeds without seeking their input, it could be courting major problems in the future.

5.3 Initial Recommendations

As a result of the various points raised in the previous sections dealing with single premium payments or annual premium payments, the following decisions were recommended by Program senior staff:

1. Single or Annual Premium?

   The single premium option was recommended because of the relatively low marketing costs, ease of selling, low selection alternatives and lower claims projection. It was felt that the major concerns addressed in the annual premium scenario regarding increased frequency and severity of major structural claims can be monitored adequately by close scrutiny of major structural defects in years two through five. If an increased frequency and severity is experienced premium adjustments on future enrollments can be initiated.

2. Policy Wording

Based on the premise that the current definition of major structural defects is clear and concise, it was recommended that the definition for major structural defects remain constant throughout the ten year period.

3. Maximum Coverage

It was recommended that the current $30,000 coverage not be changed throughout the term of the coverage. Insufficient expertise and experience does not afford any other prudent option at this time.

4. Deductibles and Investigation Deposits

It was recommended that in years 6 - 10, a $250 investigation deposit be initiated. If the investigation shows proof of a major structural defect, this deposit would be used as the homeowner deductible and applied to the repair costs. If no claim exists, $150 is returned to the homeowner and $100 retained to cover the cost of the inspection and other administrative costs.

5. Would the Program be deemed an insurance company?

It is believed that this issue is ongoing, but it has been handled well in the past and no problems are foreseen in the future.

5.4 Recommendations Adopted by Alberta's Program

On December 13, 1985, the board of directors of Canada's original New Home Warranty Program gave final approval to another first in Canadian warranty history, namely Canada's first ten year warranty program. In their motion to approve the plan, the following final recommendations were unanimously approved:

1. The optional extended major structural defect warranty be offered on new homes only effective January 1, 1986.

2. The extended warranty not be offered on homes whose warranties are due to expire, because of the view that units enrolled by existing homeowners may be too selective.

3. A premium of $100 be charged for the additional five years of major structural defect coverage.

4. Major structural defect coverage be maintained at $30,000 throughout the entire ten year period.

5. A refundable inspection fee of $100 be introduced to assist in eliminating frivolous claims.

6. Liaison with the Department of Consumer and Corporate Affairs be initiated to eliminate any problems with the Superintendent of Insurance which may arise as a result of offering the extended warranty coverage.

APPENDIX A

WARRANTY ANALYSIS - A HISTORY OF CANADIAN STUDY

APPENDIX A

Warranty Analysis - A History of Canadian Study

In response to a growing public, government and industry concern that purchasers of new housing are adequately protected for their investment, Alberta builders formed together through the auspices of the Alberta Home Builders Council (later to become the Housing and Urban Development Association of Canada, Alberta Council and currently referred to as the Canadian Home Builders Association, Alberta Council) in 1961 to establish a committee whose responsibility was to study, establish policy and set up recommendations with the view to establish a system or policy of registering all Alberta Home Builders.

Over the next three year period the Committee continued to meet with representatives for all local associations of the provincial association and in June of 1964 a meeting was called in Red Deer under the chairmanship of A. Usselman, Chairman of Alberta Council to review the findings of the Committee and evaluate their recommendations. Approximately thirty builder representatives from Edmonton, Red Deer, Calgary and Stettler were in attendance.

The Committee recommended that a system of builder certification would be established and provide a method whereby the home building industry would institute a measure of responsibility and liability control administered by an independent group separate from Alberta Council. The group to be formed would be registered under the Societies Act or be incorporated as a non-profit company under Section 9 of the Companies Act and in the Committee's view would eliminate the need for any government instituted or controlled licensing system.

Through their three years of study, the Committee had investigated the methods of Certification of Builders in the United Kingdom and as well had meetings with other groups across Canada who were investigating similar methods of Builder Certification. The Committee reported that a certification process was required because the entire industry was being hurt to a greater or lesser extent depending upon location and other circumstances by the actions of a few unscrupulous builders or by unreasonable demands by the occasional purchaser.

Therefore, in order to improve public acceptance of the homebuilding industry and provide protection for the buying public and to establish a recognized certificate or emblem for the builders who adhered to certain principles, it was moved by the Committee that a provincial certification program be created having proper aims and objectives and a proper constitution be registered under either the Societies or Companies Act and that all builders throughout Alberta may apply for membership. (A Memorandum & Articles of Association were filed with the Companies Branch approximately 10 years following this meeting and are attached as Appendix B.)

It was the Committee's recommendation that builder registration or certification not be compulsory, but that the plan be set in operation so that it would be to the obvious advantage of all reliable and bona fide businessmen builders to be certified. The conditions of membership would be based on business integrity and financial stability. The Committee also identified that some individuals may apply who have little or no experience or performance status in the residential construction industry. They therefore recommended that in situations such as this a probationary or qualifying classification be provided. Upon the satisfactory completion by this applicant of a certain number of homes, they would be provided with permanent membership as long as they adhered to the standards as set out by the company. The Committee proposed that the non-profit company be incorporated which would provide the status to enable it to enter into contracts and do all things required for its continuance.

In its recommendation for the mechanics under which the Certification Program would be administered, the Committee suggested that Directors would be elected on an pro rata basis by each local builder association. The Board would perform all the normal functions required by the Act and would act on behalf of all registered or certified builders. They would establish and direct the administration function of the Program and would be responsible for establishing policy and the necessary administrative machinery. Administrative control of the constituted company would remain within the power of this duly appointed Board of Directors and Executive.

In its recommendation the Committee felt that a separate Arbitration Authority would have to be created to deal with reports on customer complaints and on the certification of members. This authority, the Committee suggested, must be above suspicion as it would never do for such an arbitration to be performed by the same body responsible for the Association's machinery and administration whose same purpose is for the protection of its own members interests. They therefore recommended that the Arbitration Authority would consist of an architect, an engineer, a lawyer, a representative from the Consumer's Association of Canada, the Urban Development Institute, a builder and some prominent citizens at large.

In an attempt to lay out some basic principles of how the registration or certification process would work, the Committee felt that an eligible builder could apply for certification and subject to qualifications to be established would be accepted. Once accepted, the builder would be requested to sign a binding agreement with the Program stating he would live up to the objects thereof and also that he would accept rulings handed down by the Arbitration Authority. He would further sign with the purchasers of each of his homes, a document of warranty indicating his willingness to maintain that home for a reasonable specified period and covering such other points of guarantee or reasonability as outlined by the Company. Upon acceptance the Certified Builder is issued a certificate and an appropriate plaque for installation in each house that he builds.

In dealing with complaints from homeowners the Committee felt that a qualified inspector would visit the home to investigate the problem. Once the inspection was completed a report of the inspector's findings would be discussed with the builder and the Program's Arbitration Authority. The Authority will then make a decision and if the builder refuses to comply the builder's Certification would be removed. In its report the Committee stated that incidents where builders would refuse would be rare and claims against the company small. They felt that the effectiveness, prestige and power of being a Certified Builder would discourage all bona fide firms from refusing to comply with rulings for fear of losing their certification. (For example, the Committee's reasoning was accurate when cases arise where builders are still in operation. However, most instances encountered today result from builders who are no longer in business due to insolvency and therefore the Program becomes directly responsible for repairing the defects and paying the cost of repairs. (A later section of this paper deals with insurance and claims.)

The Committee also felt that in time the public would insist on a properly certified home when buying and this in itself would upgrade the building practices throughout the Province. It was also noted that the success of the system of certification would be predicated upon the builder accepting such responsibilities when applying for Certification and entering into agreements with the Certification Authority to make good when so instructed. It was noted that although membership was voluntary, once the builder becomes a Certified Home Builder and undertakes to conform to the conditions of Certification as set out by the Provincial organization, fear of losing their certification would discourage all bona fide firms from refusing to comply with a ruling of the Program.

To finance the introduction of the Certification Organization and fund its ongoing operations, the Committee recommended a fee be established for each home built by the members as well as an initiation fee and an annual renewal fee. It was also noted that provisions would have to be made for a fund which would be utilized for the correction of deficiencies disclosed by complaints in the event of a business failure by one of its members.

The Committee felt that administrative control of the organization would lie within the jurisdiction of the appointed delegates constituting the executive but a permanent staff with an Administrative Director would be required to operate the company on a day to day basis. Inspections would be arranged for on a part-time or contract, or per inspection basis and would be authorized only after administration had evaluated the complaint and prepared initial reports for the Arbitration Authority's consideration. The Committee felt that from a public relations and effectiveness standpoint, inspectors would not become involved in the rights and wrongs or validity of any claims but should appear to the public as only fact gatherers and be identified as having no responsibility in the matter of decisions or rulings handed down by the authority. As well, all paid staff should be responsible for publicizing the system, and assisting the Public in making claims, but in no case should they become involved or should it

be inferred that they are on the side of either the builder or the claimant. All matters of claim validity and rulings handed down should clearly and plainly be the responsibility of the Arbitration Authority.

In conclusion, the Committee recommended approval in principal of the plan. In their opinion the formation of a Certification Program was an urgent and vital necessity and its formation would:

(a) forestall arbitrary establishment by government of compulsory licensing which would be to the detriment of the home building industry,

(b) rapidly and significantly increase the favourable public opinion of those builders who choose to become certified and to truly serve the public,

(c) generally upgrade the industry in all aspects.

(The Minutes of the June 11, 1964 meeting in Red Deer are attached as Appendix B.)

Warranty Program Investigation on a National Level

Following completion of the Committee's study into Builder Certification, discussions concerning the plan were held with the the Housing & Urban Development Association of Canada. After lengthy discussion at the National level, Alberta was requested to delay implementation of their Committee's recommendations until the National Association had sufficient time to look at a similar registration proposal based on a national registration and administration system.

Nothing of any consequence was done by the National Association until January of 1972 when a resolution was passed at HUDAC's National Convention that a Committee consisting of representatives from HUDAC, Canada Mortgage & Housing Corporation (CMHC) and the Federal Department of Consumer and Corporate Affairs be formed to study the question of home buyer protection.

This Committee met regularly and in November of 1972 presented their "Interim Report on Consumer Protection for New Home Buyers". The report contained the following recommendations.

a) An independent organization separate from the National Home Builders Association should register builders.

b) Standard warranties should be issued by builders for all new homes sold.

c) All homes are to be inspected during construction.

d) Certification and insurance documents for inspected and passed homes should be issued.

e) Builders will be responsible under warranty for poor workmanship and faulty materials.

f) Purchasers to be compensated when builders fail to rectify defects.

g) Institution of a conciliation and arbitration system to settle disputes

h) Insurance coverage beyond the builder's warranty should be available.

The Joint Committee felt the above was essential to a satisfactory system of consumer protection.

The National Association subscribed to all the Committee's recommendations except the reference to an independent certification organization. The Association favoured a HUDAC operated plan because they were committed to demonstrate their responsibility and integrity toward the new home buyer and their home builder members.

Following submission of its report and recommendations, the Joint Committee was disbanded. In January of 1973, the HUDAC Board of Directors voted to form a New Home Warranty Committee and authorized it to proceed with the creation of a plan to establish a non-profit independent organization to administer a warranty and insurance plan. At its first meeting the Committee recommended that the firm of Urwick, Currie and Partners, Ltd. be engaged to carry out a complete study into the implementation of a warranty and insurance protection plan for new home buyers.

In July of 1973 a report entitled "A Warranty and Insurance Protection Plan for New Home Buyers" was completed and copies submitted for comment to CMHC, the HUDAC National Board of Directors, and the Honourable S. R. Basford, Minister responsible for Urban Affairs. Copies were also circulated to the local and provincial HUDAC Associations. The report was quite extensive and identified the following groups as participants in the plan and provided a summary of the protection, purposes and nature of the plan.

Parties to the Plan

New Home Buyers

a) Official statistics and estimates by the Economic Council of Canada, indicated that builders would sell between 1,800,000 new homes between 1960 and 1980 which, at 3.5 persons each, would affect 3,300,000 over a span of twenty years.

b) These new home buyers should be assured that their investment is sound, of good value, and structurally durable,

c) that their homes are completed to an agreed standard,

d) that deposits or advance payments are secure,

e) that defects apparent on completion, or within a reasonable time thereafter, will be rectified,

f) in brief, that new home buyers require an efficient and effective insured home warranty plan.

Home Builders

g) There were two groups identified -- the 1,900 members of the Housing & Urban Association of Canada (HUDAC) who accounted for approximately 80% of all new home construction in Canada, and the estimated 3,800 non-members who built the remaining 20%.

Lenders

h) Banks, insurance and trust companies and others active in the mortgage field would want to enhance the security and value of their loans and investments. Therefore, their aims should be compatible with those of the home buyer and the builder. A viable Plan would therefore foster, encourage and tend to secure the mortgage investment.

Government

i) While building regulations were primarily recognized as a provincial responsibility, all three levels of government were understandably concerned that new home buyers have satisfactory protection available to them.

j) Therefore, the needs and aims of all groups were considered in framing the policies and provisions of the Plan and in designing its organization, standards, operation, inspection, conciliation policies and procedures.

k) Government recognized that the majority of builders were producing good quality housing and, based on the number of units produced annually, the ratio of consumer complaints is not significant.

l) They also recognized that Builders' aims were pragmatic. Therefore, they were justifiably concerned that the Plan regulations would not add unnecessarily to the cost of a home, which ultimately must be borne by the new home buyer.

m) Government wished to avoid impractical external controls and constraints which would slow up the building process, add to the cost but not necessarily contribute to better housing or improve consumer protection.

n) They recognized that builders wished to achieve uniformly high standards of construction through the widest possible participation in the plan and in this way better satisfy the needs of new home purchasers.

o) That prompt and widespread implementation could best be achieved by a Plan which has wholehearted builder support.

Summary of the Purposes and Nature of the Plan

The purpose of the proposed Plan was to assure:

1. a) that agreed construction standards were met;

   b) that future warranty commitments were guaranteed;

   c) that deposits were protected;

   d) that complaints and grievances were handled quickly and equitably;

   e) that construction standards and quality were maintained; and

   f) that housing research was fostered.

2. These objectives would be achieved through:

   a) registration of builders; and

   b) certification of new homes which the builder builds for sale.

Identity

3. A Warranty and Insurance Company (the Council) would be incorporated to administer the Plan as a non-profit subsidiary of HUDAC.

Building Standards to be Used

4. The National Building Code (NBC) and the Canadian Code for Residential Construction (CCRC), were recognized as the standards for residential construction across Canada.

5. The NBC was a comprehensive document intended to facilitate the regulation of building construction throughout the country.

6. The NBC was produced and published by the National Research Council (NRC) through the Associate Committee on the NBC. The members of the Associate Committee were appointed by the NRC and were selected to provide a balanced representation of interests across the country. In addition to nine standing committees and boards, the Code cross-references other relevant standards.

7. The NBC and the CCRC would be the standards used by the Plan except in those provinces which have in effect provincial builder codes based on the NBC, in which cases the provincial code would become the standard.

Forms of Housing Included

8. The governing principle applied in designing the Plan was that the needs of as many new home buyers as possible would be met in terms of warranty and insurance protection.

9. The method of financing was not a criteria for entry into the plan.

10. The criteria for inclusion of new homes at the inception of the Plan were as follows:

A new home must be:

a) built in Canada for sale for permanent owner-occupancy

b) affixed to a permanent foundation

c) constructed by a builder registered with the Council under the terms of the Plan

d) constructed to the standards of the NBC, the CCRC or a provincial building code where appropriate

e) inspected prior to certification by the Council's authorized inspector

11. The following forms of housing were embodied initially under the provisions of the plan, provided the above criteria were met:

a) Type of Housing -

single detached
semi-detached
duplex (provided owner occupies one unit)
row housing (provided each unit is owner-occupied)

b) Ownership -

condominium housing units
homes built on leasehold land
co-operative housing (registered builder's option subject to Council's approval of the by-laws of the co-operative)

c) Method of Construction

prefabricated homes
manufactured homes
shell houses (registered builder's option to turn-over stage)

Forms of Housing to be Excluded

12. Because they do not meet the previous criteria or because particular impediments were foreseen which prevented their immediate inclusion, the following forms of housing were excluded at the start of the Plan:

Rehabilitated housing
Recreational housing (not regularly occupied second home)
Mobile homes

The Warranty and Insurance Protection Plan

13. A total of ten years of protection was recommended under the Plan. The primary term of the Warranty and Insurance Protection Program was for a period of five years followed by a secondary five year term of insurance coverage would will be available to the home purchaser, at his option.

Builder's Portion of the Warranty

14. The term of the builder's warranty was for one year from the date of the completion of the "Turnover Form" duly executed by the builder and the purchaser.

15. Under the warranty the builder would undertake:

a) to rectify defects or deficiencies in the dwelling unit which do not confirm to the Council's standards;

b) to rectify workmanship which does not meet the Council's level of good building practice;

c) to replace defective materials;

d) to correct major structural defects; and

e) to remedy warrantable items brought to his attention by the purchaser or the Council.

Council's Portion of the Warranty

16. During the first year, the Council would be responsible in the event that the builder did not fulfill his above obligations.

17. In addition, the Council would provide deposit and prepayment security for the purchaser in the event of builder bankruptcy or failure.

Unwarranted Items

18. The following were not warranted under the Plan:

a) Loss or damage where written notice was not promptly filed.

b) Defective design or materials which were supplied by purchaser.

c) Secondary damage caused by defects including property damage and personal injury.

d) Normal wear and tear.

e) Normal shrinkage due to drying after construction.

f) Damage due to normal dampness or condensation due to failure of purchaser to maintain adequate ventilation.

g) Damage due to improper maintenance.

h) Alterations or additions by the purchaser.

i) Landscaping.

j) Loss or damage by fire, explosion or acts of God.

k) Loss or damage for which compensation is provided by comprehensive insurance.

l) Unattached buildings

m) Technical breaches of approved standards which do not result in real damage.

n) Damage due to insects and rodents, except where construction is in contravention of building standards.

Insurance Protection

19. The insurance would protect the new home purchaser from loss of deposits and prepayments in the event of builder bankruptcy or failure during the first year.

20. For the next four years the insurance would protect the purchaser against the cost of correcting major structural defects.

21. A further five year cover would be available, at the homeowner's option, and expense, against the cost of correcting major structural defects.

22. The Council would perform in many aspects like an insurer. By the careful screening of builders before registration, only good builders would be selected. By inspection and conciliation, based on NBC, CCRC and provincial standards, claims would be readily examined and settled.

23. The Council would require the insurance company to give fixed rates. Cancellations would be prohibited within the agreed upon period.

24. The initial certification fee, covering the first five-year period would be approximately $75.00 per home for insurance, inspection, administration and certification.

25. The fee would be uniform, regardless of location or value of the property, but could change with experience.

26. Initially, maximum coverage would have been $30,000 per home, with additional coverage available at increased premium. Claims for individual items of under $50 would not be covered.

27. Major structural defects were defined as follows:

"Actual damage to the load-bearing portion of the home including damage due to soil movement which affects its load-bearing function and which vitally affects or is imminently likely to produce a vital effect on the use of the home for residential purposes."

Builder Registration

28. Existing or prospective home builders, whether HUDAC member of non-member, could apply to the Council for acceptance as a registered builder under the Plan.

29. The purpose of the registration was to ensure that the builder would meet the established criteria and that reasonable assurance was obtained so that the builder would perform to the standards established by the Council.

30. The registered builder had to agree to register all eligible homes with the Council for certification.

Registration Procedure

31. All builders desiring to build under the Plan were required to file an application and pay a registration fee. The Council would then request:

a) A statement of previous experience in residential construction.

b) A list of company officers.

c) A financial statement, and/or other references as required.

d) Particulars of homes under construction.

e) Particulars of four newly constructed and occupied homes.

32. The Council would then:

a) Obtain independent credit reports.

b) Conduct a technical inspection of houses under construction and occupied.

c) Conduct an interview with occupants of the homes.

33. Based on the results of these investigations, the candidate would be accepted or rejected for probationary membership, at the discretion of the Council. The Council would also specify the duration and condition of the probationary period. Under certain circumstances the Council could require a bond.

Probationary Builder

34. The applicant was be advised if he was eligible for registration and was placed on a probationary list until such time as he met the Council's standards and requirements. In some cases this could be for an indefinite period.

35. During the probationary period, homes may be certified; however, an additional deposit equal to the home certification fee would accompany each home certification.

Registered Builder

36. A probationary builder would advance to full Registered Builder status at the discretion of the Council.

37. Once the builder received full membership the excess monies received over and above the regular home registration fee, on all homes, would be returned to the builder less any costs incurred on his behalf by the Council. In the event the builder did not meet full membership status and was de-registered, all monies paid by the builder could be kept by the Council to cover risks incurred.

Annual Renewal of Registration

38. Each year the builder would return, together with his renewal fee, a standard form covering operations of the firm, a financial statement, changes of company officers, any changes in legal structure of the business and any other documents deemed necessary by the Registrar.

Registration Fees

39. It is estimated that the registration fee to join the Plan would be $250, prior to the commencement of operation - and $350 thereafter.

40. Annual renewal of registration fees would be initially set at $50.

Registration Appeal

41. A builder who is refused registration or full membership may first appeal to the Board of Directors of the Council, following which he would have the option of seeking arbitration.

42. De-registration could be invoked for any, or a combination of, the following causes and possibly others:

a) Bankruptcy or liquidation;

b) Failure to correct legitimate infractions;

c) Non-payment of fees;

d) Any act which, in the opinion of the Council, would be likely to bring the industry, or any of the Council's aims or objects, into public disrepute;

e) Refusal to comply with a decision in a dispute made by a conciliator, unless it is under arbitration or before the courts;

f) Failure to register all eligible homes; or

g) Repeated failure to provide the Council with completed Turnover Forms prior to occupancy.

43. The decision to de-register could be made by the Board of Directors of the Council (or their appointees), based on the Registrar's recommendation. The builder could appear to defend his position. If he is dissatisfied with the decision he was free to appeal to Provincial arbitration.

Dwelling Certification

44. It was recommended that the Council adopt fundamentally the same system as that used effectively by the NHBRC in Great Britain. A thorough study, however, was needed to optimise the design of specific procedures prior to implementation and to evaluate the degree to which computerized processing could profitably be introduced.

Outline of System

45. a) The builder was required to notify the Council on a standard form of his intention to commence construction of a home and send in the certification fee.

b) Upon receipt of the certification fee and the builder's notification, the Council would check the form for general legibility and check the builder is registered and whether there are any probationary restrictions to be applied.

c) A standardized reply would be returned to the builder. Steps would be taken to ensure that any probationary requirements were met and the inspection department notified.

d) The Council's inspection department would carry out the necessary inspections.

e) When making a contract with a purchaser for the sale of a new dwelling, the registered builder would

execute a standard house purchaser's warranty agreement with the home buyer setting out the terms and obligations of the purchaser and the builder and submit a copy to the Council.

f) Prior to occupancy, a "Turnover Form" would be completed and signed by the purchaser and builder which confirmed that the house was accepted by the purchaser; however, a list of deficiencies would also be required. If the purchaser refused to sign the Turnover Form the Council's inspector would be the final arbitrator.

g) The Council would send the warranty certificate to the home buyer, together with a standard booklet clearly setting out his responsibilities under the Plan, what protection he can expect and what he must do to adequately maintain his home.

h) The Registrar's department would record all certificates issued and transfer all records to the Council's archives for safekeeping for a period of at least ten years.

Legal and Other Considerations

46. In addition to the detailed design of dwelling registration procedures for use by the Council, the Committee recognized that all agreements and warranties would have to be drafted by legal specialists, in both French and English, and verified in all provinces and territories to ensure their adequacy and legality.

Inspections

47. The Council felt that at least one physical inspection of each home was necessary and other random inspections beneficial to the warranty and insurance under the Plan, to protect the consumer and to improve the standards of construction.

48. Each home to be certified would require one inspection by the Council. If necessary, possibly during the probationary period, there would be three random inspections at the (1) foundation, (2) framing, and (3) completion stages. The Council would reserve the right to require notification cards at the above stages but would not require suspension of work pending inspection. It would be the responsibility of the Council to carry out the inspections it desires.

49. Initially, the Council could accept CMHC, municipal or other inspection certificates, thus avoiding duplication of inspections.

50. A check of the appropriate provincial and/or municipal electric, plumbing and heating compliance certification would be a necessary part of certification.

51. Certification of the home would take place only on successful completion of the established procedures.

Conciliation

52. It would be the responsibility of the purchaser to report defects to the builder. Complaints received by the Council would be dealt with initially by sending the complainant a form letter, suggesting he contact the builder, with a copy to the builder so that he was aware of the complaint. If the dispute was not solved at this stage the Council would, upon payment by the purchaser of a refundable fee ($50) institute conciliation proceedings.

53. The field conciliation officer would advise the parties that he a was launching an investigation and that he would be at the relevant site at a stipulated time. Once at the site, he would make his investigation and listen to both parties but give no opinion. A report would then be forwarded to the regional conciliation officer. He would then reply to the parties, setting forth what remedial work, if any, needs to be done. This opinion would be rendered as a base for reaching settlement and either party, if unsatisfied, may reject it and proceed to arbitration.

54. If the party lodging the complaint was supported by the conciliation officer and the claim found to have merit, then the deposit would be refunded.

55. Conciliation findings would not be binding, and therefore, either party could proceed to arbitration.

Arbitration

56. Nine provinces, the northwest Territories and the Yukon, (with the exception of Quebec), had arbitration statutes in some form at the time of drafting the report and all were similar in both thrust and structure. This would have made it feasible to implement an effective arbitration systerm.

57. It was also noted in the report that the Arbitration Act of Ontario detailed the proceedings, such as arbitrators' powers, conduct of arbitration proceedings, awards, costs and fees and this therefore could be used as the basis for the Council's plan.

58. It was recommended that in consultation with the provincial governments, a formal group (panel) be established from which arbitrators can be drawn to specifically deal with housing so that disputes could be quickly and inexpensively resolved.

Enforcement Procedures

59. The Council would have certain additional powers to discipline and de-register builders, such as the power:

a) to de-register a builder for breach of the Council's conditions or rules, or for committing any act which, in the opinion of the Council, was likely to bring into public disrepute the Council or any of its objectives or aims.

b) to de-register a builder who becomes bankrupt or goes into liquidation, or has a receiver appointed in relation to his affairs, or attempts to make a composition with his creditors, or fails within a stipulated period to answer communications with the Council.

c) to require, at any time at its discretion, a builder to provide written guarantees of his due performance of his obligations arising from any agreement entered into by him in conformity therewith.

d) to impose conditions upon continued registration of a builder following the commission or occurrence of one or more of the events referred to in (a) or (b) above.

e) to require a builder to reimburse the purchaser for his damages, if any, within a stipulated period of time in cases where a builder has failed to offer to enter into a house purchase agreement in prescribed form as it relates to warranty and where the purchaser has suffered loss in consequence thereof.

f) to discipline the builder when it was established that he failed to notify the Council of construction stages.

60. None of the above powers will be exercised by the Council without a hearing at which the builder is given the opportunity of appearing and answering the case against him. Standard arbitration proceedings will apply. Extended powers, and a broader range and variety of penalties could be extended by the Board of Directors as may be required.

61. The Board of Directors (the Board) would consist of thirty members, made up as follows:

13 Directors:
- 2 - British Columbia
- 2 - Alberta
- 1 - Saskatchewan
- 1 - Manitoba
- 3 - Ontario
- 2 - Quebec
- 2 - Atlantic Provinces

nominated by their respective Provincial Councils and approved by the HUDAC Executive Board, for a three year term with one-third retiring each year. Initial appointments would be for one, two and three years.

62. 5 Directors: (HUDAC Officers)
- President
- First Vice-President
- Immediate Past President
- Treasurer
- Executive Vice-President

3 Directors: (Appointees of the HUDAC President)

A three year term, with one-third retiring annually and a subsequent one added each year.

63. 9 Directors:
- 2 - Residential Development Council
- 2 - Manufacturers' Council
- 2 - Apartment Construction & Management Council
- 2 - Lenders' representatives

A three year term with one-third retiring annually. Initial appointments would be for one, two and three years.

64. The President of the Council would also be a member, during his term of office.

65. Service on the Board would be voluntary and without pay, except for agreed expenses incurred in carrying out the Council's business.

66. With the exception of the Chairman, the Executive Vice-President of HUDAC and the President of the Council, members would not serve more than two consecutive terms.

67. The Chairman of the Board would be elected by the Board of Directors for a period of three years. He will be an ex-officio member of all committees of the Council.

68. The Board would meet as deemed necessary by the Chairman of the Board but in no case less than once in each calendar year.

69. The Articles of Incorporation of the Council would detail all the powers of the Board but mainly its responsibilities are:

a) Maintain a register of qualified home builders

b) Make rules with respect to the qualifications of builders and set terms and conditions for their registration and de-registration

c) Prescribe registration procedures

d) Operate a warranty and insurance system to certify homes built by registered builders

e) Continue to raise industry standards through such HUDAC activities as research, builder education and consumer education

f) Insure the Council against all risks incurred in exercising its powers

g) Raise and invest money to further its statutory aims

Executive Committee

70. The Executive Committee would be composed of eight members, including the President of the Council, who would also act as Chairman. These members would be elected by the Board from its members, with three year terms of office with an initial one, two and three year tenure.

71. Except for the President, service would be voluntary and without pay. Members would be entitled to agreed expenses incurred in Board business. Members would not serve more than two consecutive terms. The President was excepted.

72. The Executive Committee would meet quarterly, or more often if necessary.

73. The Executive Committee would be empowered to exercise the powers of the Board in routine matters and to make policy decisions on prescribed matters and specifically to:

a) set registration fees;

b) set certification fees;

c) recruit, employ, dismiss and fix the salary and terms of employment of the President, who reports to it;

d) appoint auditors, legal and other consultants;

e) oversee and administer the work of the Council through the President, as well as establish and revise, if necessary, builder registration requirements, financial and technical;

f) terms of probation;

g) standards of construction in quality of workmanship;

h) annual renewal terms and procedures;

i) registration and certification recording procedures;

j) de-registration, appeal and arbitration procedures;

k) inspection procedures and standards;

l) insurance;

m) fund requirements;

n) investments;

o) finances in general;

p) the future insurance subsidiary;

q) property management, acquisition and disposition; and

r) such other policy matters required to effectively carry out the aims of the Council.

Advisory Committees

74. The members of the following Committees would be made up from appointees from related outside bodies and HUDAC Councils as the appear below. The object being to advise on and reflect the specific interests of the provinces, regions, manufacturers, lenders, construction technologists, governmental consumer affairs departments, insurance and legal associations, as they bear on

the successful attainment of the objectives of the Warranty and Insurance Council.

75. Membership shall be voluntary and non-paying, except for agreed expenses incurred in carrying out Committee business.

76. Members would serve for three years, with initial one, two and three year terms.

77. Meetings would be a minimum of once annually, or as called by the Executive Committee.

78. The members of the Advisory Committees would elect their own chairman from amongst their members and report to the Executive Committee.

Registration Committee

79. The Committee would be composed of nine members:

- 2 - Mortgage Lenders' Association
- 1 - Canadian Bar Association
- 1 - Federal Department of Consumer and Corporate Affairs
- 1 - CMHC
- 3 - builder directors appointed from the Board
- 1 - Registrar

80. Their objective would be to advise and give recommendations to the Executive Committee on:

a) builder registration requirements - financial and technical
b) terms of probation
c) standards of performance
d) annual renewal terms and procedures
e) de-registrations, appeal and arbitration procedures
f) registration and certification recording and public relations
g) certification of the home

Technical Committee

81. The Committee would be composed of thirteen members:

- 1 - Professional Engineering Association
- 1 - Royal Architectural Institute of Canada
- 2 - NRC (Code for Residential Construction)
- 2 - HUDAC Manufacturers' Council

2 - Builder Directors appointed from the Board
1 - appointee of HUDAC Technical Research Committee
1 - HUDAC Director of Research
2 - mechanical and trade associations
1 - the Chief Inspector

82. Their objective would be to advise and make recommendations to the Executive Committee on:

a) standards of inspection

b) building standards

c) quality and technical aspects of home construction

d) environmental factors

Consumer Protection Committee

83. The Committee would be composed of twenty-four members:

10 - one from each of the 10 Provincial Consumer Affairs Departments

2 - Federal Department of Consumer & Corporate Affairs

1 - a lenders' association

1 - Canadian Bar Association

1 - appointee from HUDAC Social Research Committee

2 - HUDAC builders at large

3 - builder Directors appointed from the Board

3 - Consumers' Association of Canada

1 - the Manager of Operations

84. Their objective would be to advise and make recommendations to the Executive Committee on:

a) consumer protection

b) consumers' aims and expectations

c) consumer relations

d) warranty plan credibility

e) regional disparities

f) grievance, conciliation and arbitration procedures

g) builder service performance

h) home value protection and maintenance

i) consumer education

The President

85. The President would be the chief executive officer of the Council. He would be appointed by the Executive Committee for a five year term and would be responsible to them for all aspects of the day to day management of the Council's operations. He would be the Chairman of the Executive Committee and a member of the Board as well as being an ex-officio member of the Advisory Committees.

86. The President would consult with the Executive Committee on the engagement, dismissal, terms and conditions of employment of all members of the Council's staff reporting directly to him.

The Managers

Finance and Insurance

87. The Manager of Finance and Insurance would be appointed, in consultation with the Executive Committee, by the President and would report directly to him. His specific duties would include:

a) budget

b) financial controls and reports

c) current and future financial needs

d) insurance brokerage

e) premiums and claims

f) accounting, payroll and treasury functions

g) staff records

The Registrar

88. The Registrar would be appointed, in consultation with the Executive Committee, by the President and would report directly to

him. The key responsibilities would be:

a) evaluation of builders for registration and certification of homes

b) registration and certification issuance and fee collection

c) administration of master registers and certificates

d) probation and de-registration administration

e) builder and consumer relations on the national level

f) electronic data processing

Manager of Operations

89. The Manager of Operations would be appointed, in consultation with the Executive Committee, by the President and would report directly to him. His key responsibilities would be:

a) co-ordinating the day to day work of the regional managers who report directly to him

b) to work closely with the Chief Inspector to co-ordinate the work of the regional inspectors

c) to work closely with the Registrar to co-ordinate the regional registrations, certification, probation periods, de-registrations

d) general regional administration

e) co-ordination of public relations at the regional level

The Chief Inspector

90. The Chief Inspector would be appointed, in consultation with the Executive Committee, by the President and would report directly to him. His key responsibilities would be:

a) ensuring the efficient execution of the inspection and conciliation process

b) co-ordinating the functional work of the regional inspectors and conciliators who report administratively to the Manager of Operations through their regional managers.

c) ensuring the fact of consumer protection through equitable grievance and conciliation procedures

d) preparation of cases and precedents for presentation in arbitration

e) conciliation records and statistics

Secretary and Legal Counsel

91. The Executive Committee would appoint a legal representative who would act as Secretary of the Council and provide legal advice.

Regional Managers - Six

92. Regional Managers would be appointed by the Manager of Operations in consultation with the President and Executive Committee.

Regional Staff

Province	Offices	Inspection Staff & Conciliation	Total Staff
British Columbia	5	14	26
Alberta	4	13	24
Saskatchewan/Manitoba	5	14	26
Ontario	8	40	65
Quebec	6	28	43
Atlantic Provinces	4	7	19
	32(1)	125	203(2)

(1) One of each of the field offices would be located in the regional office facilities

(2) Head office staff of 49 was not included

Staff Build-Up

Year	Certificates Issued	Rated Build-Up % Capacity	Inspections (# at Yr end)	Total Staff (# at Yr end)
1	30,000	23	29	58
2	70,000	54	68	136
3	100,000	77	96	194
4	120,000	92	115	232
5	130,000	100	125	252

Total Certificates Issued: 450,000 in first five years

Following a thorough analysis of the Study by CMHC, the Federal Department of Consumer and Corporate Affairs, HUDAC, and the Federal Minister of Urban Affairs called a meeting of all the parties to the Study, to consider a proposal that there be created in Canada a system of consumer protection for the purchasers of new housing. Following thorough discussion and debate, the following motion was presented:

> WHEREAS there has been considerable research in recent years on the formation of a national home warranty plan for new home buyers,
>
> WHEREAS various government departments, national associations, etc., have various points of view in determining the essential elements of a home warranty plan for new home buyers,
>
> THEREFORE, be it resolved that the task force be asked to develop the basic outline including among other things recommendations and a presentation of various options concerning
>
> a) the degree of warranty protection to be provided;
>
> b) insurance;
>
> c) inspection;
>
> d) builder registration;
>
> e) conciliation and arbitration;
>
> f) building standards;
>
> g) administrative structure; and
>
> h) the cost.

APPENDIX B

MINUTES OF THE MEETING OF THE ALBERTA HOUSING COUNCIL
JUNE 11, 1964

APPENDIX B

MINUTES OF THE MEETING OF THE ALBERTA HOUSING COUNCIL

Held on Thursday the 11th of June, 1964 at the Capri Hotel in Red Deer. A. Usselman, Chairman of the Council, chaired the meeting and others present included representatives from Edmonton, Calgary, Red Deer and Stettler, making a total attendance of 30. It was MOVED by Howard Ross, SECONDED by Eric Weidman, that the minutes of the previous Council Meeting be adopted as read. CARRIED.

E. Wagner, Calgary, gave a short summary on the forthcoming 1965 N.H.B.A. Convention advising the meeting that there would be approximately 59 exhibits for the delegates to view and urged everyone to register early.

Mr. Usselman, Chairman, stated that the main purpose of this meeting was to nominate and elect the necessary officers for the Certification of Builders Society. He then called on Mr. Tonin, Chairman of the Certification Committee to give further explanation of what was required.

Mr. Tonin pointed out that there have been three years of work put in to the setting up of this Certification Society and that it had been accepted by the Registrar of the Societies Act to a certain extent but in order to be registered under the Societies Act, the necessary officers must be appointed, such as President, First, Second and Third Vice President and Secretary Treasurer. He went on to point out that the Alberta Housing Council was set up to deal with the problems of the local Associations but that this Certification Committee was a body of its own and in no way affiliated with the Council nor would it have any affiliation whatsoever with the local House Builders' Associations. He also stressed the point that we in Alberta would be the first group in Canada to have Certification for our builders. Many questions were asked regarding qualifications, standards, fee structure, etc. but it was explained that until the officers were elected, nothing definite could be stated. Once the registration of this Society is established, then the elected officers will draw up a Constitution including qualifications, standards, etc. and bring them back to a meeting of the Alberta Housing Council for approval. Mr. Tonin again advised that the Certification Council itself would be independent of the Society, the Officers of the Society would only be the governing body of the Council. Council Officers will be picked or appointed by the Officers of the Society.

Mr. Tonin mentioned that at the last Housing Council meeting, there were a number of men who stated that they would be interested in becoming charter members of the Alberta Certification Builders Society. These included: Don Wilson, Klaus Springer of Calgary; Claire Alton of Red Deer; Joe Spenrath, Eric Wiedman, Ches McConnell, and Julius Ekert of Edmonton.

Mr. Tonin was asked what were the objects of the Certification Council and he answered that the objects were to insure a high standard of workmanship, materials and design, high standard of business ethics, the advancement of high building industry through understanding, good will and united in service to Society, setting up a standard of specifications for Certified House Builders, the registration of certified housebuilders, and to establish and maintain an administrative body in respect of certificates issued.

Mr. Avery stated that this Council has been aiming over the last two years at making this so desirable that a builder would want to become a certified builder. In other words, we were professionalizing the building industry. Therefore, Certification Council must be a separate body.

Mr. Usselman, Chairman of the meeting, asked for nominations in the following order: President, 1st Vice President, 2nd Vice President.

J. Spenrath nominated J. Tonin of Calgary as President of the Certification Society. It was MOVED by G. Campbell of Edmonton, SECONDED by E. Weidman, Edmonton, that nominations cease. CARRIED. Mr. Tonin, therefore, is President of the Certification Society.

Nominations for 1st Vice President: Eric Weidman, Edmonton, nominated Joe Spenrath, Edmonton. It was MOVED by L. White, Edmonton, SECONDED by M. Goshko, Edmonton, that nominations cease. CARRIED. Mr. Spenrath, therefore, is 1st Vice President of the Certification Society.

Nominations for 2nd Vice President: L. Brodie of Stettler nominated Frank Avery. It was MOVED by Eric Weidman, SECONDED by F. Milner of Stettler, that nominations cease. CARRIED. Therefore, Mr. Avery is 2nd Vice President of the Certification Society.

Nominations for 3rd Vice President: Bill Plante, Calgary, nominated C. Alton, Red Deer. It was MOVED by C. Eckart, SECONDED by Joe Spenrath that nominations cease. CARRIED. Mr. Alton is now 3rd Vice President of the Society.

Nominations for Secretary Treasurer: J. Eckert nominated Don Wilson. It was MOVED by Joe Spenrath, SECONDED By Eric Weidman, that nominations cease. CARRIED. Mr. Don Wilson, then is Secretary Treasurer of the Certification Society.

It was MOVED by L. Brodie, Stettler, SECONDED by H. Ross, Calgary, that Mrs. George be nominated as Recording Secretary of the Society. CARRIED.

B. DeBoon, Red Deer, asked why we were being registered under the Societies Act instead of the Company's Act; he pointed out that being registered as under the Societies Act, we would have no authority to order and control. Mr. Tonin answered that we could be registered under either but had had been advised by the solicitor that registration under the Societies Act would be

the best. This to be questioned further by Mr. Tonin to the solicitor. Fred Milner, President of the Stettler House Builders' Association, extended a vote of thanks to Mr. Alton of the Red Deer Association for arranging the accommodation for the meeting.

Betty George, Calgary, extended an invitation to the members of the other Alberta Associations to attend their Annual Barbecue being held on the 6th of July and stated that notices would be going out to all Alberta House Builders' Associations regarding this event.

Eric Weidman, President of the Edmonton Association thanked Mr. Alton of the Red Deer Association for being host to the meeting and arranging such a delectable dinner.

Mr. Weidman also mentioned to the meeting The Builders' Bulletin #159, re: Conditional Sales Contract and advised them to check with their local C.M.H.C. Office.

Mr. Alton of Red Deer spoke on the probability of the $500.00 Winter Campaign and was asking the help of Edmonton and Calgary to request that this money for loans be made available earlier in the season. In other words, starting date for the basements so that money would be available sooner. Mr. Alton was advised that the National Association were continually working on this either to have it discontinued completely or to have earlier starting dates.

There being no further business, Mr. Usselman, Chairman of the Meeting called for adjournment.

ADJOURNMENT 9:30 P.M.

APPENDIX C

BUILDERS WHO COMMITTED FUNDS TO THE PROGRAM

APPENDIX C

BUILDERS WHO COMMITTED FUNDS TO THE PROGRAM - 1975

REGISTERED BUILDERS - EDMONTON

Alldritt Homes (1964) Ltd.
B & H Homes (Edmonton) Ltd.
J. Baker Construction Ltd.
Barkley Homes Ltd.
Birkholz Construction Ltd.
Bojack Developments Ltd.
Boychuk Construction (Sask.) Ltd.
Bracco Construction Ltd.
Bylane Custom Builders Ltd.
Cairns Homes (1972) Ltd.
Camelot Construction Ltd.
Cameron Homes Ltd.
Candlelight Homes Ltd.
Cedarglen Homes (A Division of Atco Industries Ltd.)
Clareco Developments Ltd.
Comfort Homes Ltd.
Cozy Homes Ltd.
Darlington Homes Ltd.
Dekker Construction Ltd.
Delwood Construction & Development Ltd.
Design West Homes Ltd.
Dykstra Construction Ltd.
Edmonton Country Homes & Developments
Ekert & Smith Construction Ltd.
Engelman Homes Ltd.
Engineered Homes Limited
Esquire Homes Ltd.
Glacier Developments Ltd.
Gothic Development (A Division of Gothic Investments Limited)
Granadon Builders Ltd.
Hallmark Homes (1975) Ltd.
Hill Developers Ltd.
Jackson Homes Ltd.
Labrenz Construction Ltd.
Ace Lange Construction Ltd.
Lorinda Construction & Realty (1979) Ltd.
MacLachlan & Mitchell Homes Ltd.
Marlo Homes Limited
MCB Homes Ltd.
Melton Homes (A Division of Melton Real Estate Ltd.)
Molzahn Construction Ltd.
Walter Neiser Construction Ltd.
Nernberg Construction Ltd.
Niakwa Development of Canada Ltd.
Nu-Town Construction Ltd.
Nu-West Development Corporation
Oakland Homes Ltd.
Oakridge Developments Ltd.
P.J. Homes Ltd.
Park Homes (A Division of Lar-Mac Developments Ltd.)
Permyd Design Homes Ltd.
Len Perry Homes (Edm) Ltd.
Plainsmen Developments Ltd.
Qualico Developments Ltd.
Rio-Vista Homes Ltd.
S & S Homes (Edmonton) Ltd.
Sage Homes (Edmonton) Ltd.
Scandia Homes Ltd.
Schaaf Bros. Construction Ltd.
Shostak Construction Ltd.
Space Homes Ltd.
Springer Construction (Edmonton)
Squair Homes Ltd.
Stanton Developments Ltd.
Style Homes (Edmonton) Ltd.
United Home Builders Ltd.
M. F. Wakal Construction Ltd.
Wayne Homes Ltd.
Westland-Imperial Developments
Willowbrook Homes (1964) Ltd.
Wonder Homes Ltd.

REGISTERED BUILDERS - CALGARY

A.B. Custom Designers Ltd.
Arcan Construction Ltd.
B & H Homes (Calgary) Ltd.
Behrens Contractors Ltd.
Better Built Homes Ltd.
Britannia Homes Ltd.
Built-Rite Homes Ltd.
Cairns Homes (1972) Ltd.
Cavalier Construction and Property Developments Ltd.
Cedarglen Homes (A Division of Atco Industries Ltd.)
Chalus Construction Ltd.
Clareco Developments Ltd.
Coral Construction Ltd.
Daken Homes Ltd.
J. L. Doyle Construction Ltd.
E. B. Developments Ltd.
Engineered Homes Limited
Foremost Construciton Ltd.
Gaponow Construction Ltd.
Golden West Homes Ltd.
Herman Enterprises
Heslip Holdings Ltd.
Holden Construction Ltd.
Holly Management Ltd.
Homes by Hanson Ltd.
Husky Homes Ltd.
J. K. Built Homes Ltd.
G. Janssen Homes Ltd.
Kentron Homes Ltd.
Koltes Construction Limited
Linwood Homes Ltd.
Maco Homes (Holdings Ltd.)
Makoi Holdings Ltd.
Master Craft Homes Ltd.
Melton Homes (A Division of Melton Real Estate Ltd.
Morrison Construction Ltd.
Niakwa Development of Canada Ltd.
T. H. Nielsen Construction and Holdings Ltd.
Nu-West Development Corporation Ltd.
P.W. Construction Ltd.
Palace Homes Ltd.
Paragon Homes Ltd.
Park Place Projections Ltd.
Peters Bros. Construction Ltd.
Pilot Construction Ltd.
Porter Developments Ltd.
Qualico Developments
Art Rempel Homes Ltd.
Riviera Builders Ltd.
S & S Homes (Calgary) Ltd.
Semon & Lucas Construction
Spindler Homes Ltd.
Springer Construction (Calgary) Ltd.
Sterling Real Estate (Calgary) Ltd.
View-West Construction Ltd.
Warkentin Construction Ltd.
Westglen Homes Ltd.
R. Wiebe Construction Ltd.

REGISTERED BUILDERS - RED DEER

B & H Homes (Edmonton) Ltd.
Cairns Homes (1972) Ltd.
Cedarglen Homes (A Division of Atco Industries Ltd.
Consolidated Holdings Ltd.
Engineered Homes Limited
Stanton Developments Ltd.
Volk Builders Ltd.
Welikoklad Construction & General Builders Ltd.

REGISTERED BUILDERS - GRANDE PRAIRIE

Burkholder Building Supplies Ltd.
D & B Building Contractors Ltd.
Dan's Construction Ltd.
Engineered Homes Limited
Rimrock Developments Ltd.
Solheim & Haugen Construction Ltd.

REGISTERED BUILDERS - LETHBRIDGE

Ed Bartel Construction Ltd.
Blue Star Homes Ltd.
Boychuk Construction (Sask.) Ltd.
Chaperal Construction Ltd.
Cresthome Construction Ltd.
Engineered Homes Limited
Jorgensen Construction Ltd.
Klassen Construction (Coaldale) Ltd.
Nu-Mode Homes Ltd.
Parade Homes Ltd.
Peter Pauls' Construction Ltd.
Peter Simon's & Sons Construction Ltd.
Virginillo Homes Ltd.
Wirzba Bros. Construction Ltd.

REGISTERED BUILDERS - MEDICINE HAT

Century Homes Ltd.
Engineered Limited
Rodermond Construction Ltd.
Silcher Construction Ltd.
Sohn Construction Ltd.
Versatile Building Systems Ltd.

APPENDIX D

MEMORANDUM OF ASSOCIATION OF NEW HOME WARRANTY PROGRAM OF ALBERTA

APPENDIX D

MEMORANDUM OF ASSOCIATION

OF

NEW HOME WARRANTY PROGRAM OF ALBERTA

1. The name of the Company is "NEW HOME WARRANTY PROGRAM OF ALBERTA".

2. The objects for which the Company is established are as follows:

(a) To promote, manage, administer, operate and advance a new home warranty program in the Province of Alberta under which members of the public residing in the Province of Alberta and purchasing new homes in the said Province will receive protection for deposits and pre-payments made to Alberta builders who are members of the said certification program and to assure that warranty commitments, construction standards and guarantees made by Alberta builders to the public under the said new home warranty program will be honored, insured and guaranteed;

(b) To provide a method of dealing with complaints and grievances by members of the public involving the investments of the public and warranties and guarantees pertaining to new homes constructed in the Province of Alberta so that such complaints and grievances may be handled on a rapid and equitable basis;

(c) To promote understanding and communication between member home builders and the general buying public of the Province of Alberta insofar as new homes are concerned;

(d) To promote and actively support the endeavors of the Alberta Council of the Housing and Urban Development Association of Canada in its efforts in improving relations with all branches of Government, both Federal and Provincial, and to support the said Alberta Council in promoting legislation and other Government regulations which might be considered in the best interests of the home building industry in the Province of Alberta;

(e) To support and promote the image of the home building industry in the Province of Alberta and to further such objectives to carry out such research, publicity and educational programs from time to time as the membership of the Company might consider necessary and advisable;

(f) To provide information and educational services to the members of the Company and to co-ordinate their communications and educational material which might be to the benefit of the home buying industry in Alberta at large;

(g) To engage in the development and promotion of further or additional plans or certification program from time to time on such expanded or additional basis as might become necessary in the view of the members for the protection and interest of the public at large in the Province of Alberta;

(h) To support and promote the publication and/or distribution of literature, films, brochures, tapes, recordings and other communications of all kinds which will advance or further the aims and objectives of the Company;

(i) To pay salaries, rents and other normal operating expenses of the Company;

(j) To purchase or otherwise acquire and undertake to hold all or any part of the property, assets, liabilities and engagements of any one or more companies, interests, societies or associations which the Company may be authorized to acquire by way of purchase or otherwise;

(k) To own, buy, sell exchange, lease and transfer all or any part of any property, assets, real estate, liabilities and engagements which might be deemed in the opinion of the members to advance the objects of the Company;

(l) To borrow money to advance the objects of the Company;

(m) To assist, promote and actively support the Alberta Council of the Housing and Urban Development Association of Canada to urge upon the appropriate authorities changes, alteration and additions to Governmental statutory and regulatory provisions to more adequately serve the requirements and interest of the new home building industry in the Province of Alberta;

(n) In the event of a winding up of the Company to transfer all of its assets and liabilities to a body incorporated having similar objects and limitations as the Company comprising substantially the same membership as this Company but in the event that such a body is not in existence upon winding up of the Company, then in such event dissolution, to distribute to property or assets of the Company after the payment satisfaction of all debts and liabilities to such educational, charitable or benevolent organizations as may be decided by the members providing such organizations have objects acceptable to the members;

(o) To do all other such lawful thihgs as are incidental or conducive to the attainment of any of the above objects and generally to support and engage in any worthy objects or projects.

3. (a) The liability of the members is limited.

(b) The company is not formed with the acquisition of gain as its object and it is the intention of the Company to apply the profits, if any, and any other income of the Company in promoting its objects and prohibits the payment of any dividend to any member of the Company provided that nothing herein shall prevent the payment in good faith of reasonable renumeration to any servant or employee of the Company in return for any services actually rendered to the Company but no director of the Company shall be appointed to salaried office of the Company or any office of the Company paid by fees and that no renumeration or other benefit in money or monies worth shall be given by the Company to any of its members.

4. The powers authorized by Section 20, of the Alberta Companies Act are hereby excluded.

5. Every member of the Company undertakes to contribute to the assets of the Company in the event of its being wound up while he is a member or within one (1) year afterwards for payment of the debts and liabilities of the Company contracted before he ceases to become a member and the cost, charges and expenses of winding up and for the adjustment of the rights of the contributories amongst themselves such amount as may be required not exceeding the sum of ONE - 00/100 - ($1.00) DOLLAR each.

APPENDIX E

ARTICLES OF ASSOCIATION OF THE NEW HOME WARRANTY PROGRAM OF ALBERTA

APPENDIX E

ARTICLES OF ASSOCIATION

OF

NEW HOME WARRANTY PROGRAM OF ALBERTA

TABLE "A"

1. The regulations in Table "A" in the first schedule of the Companies Act shall not apply to the Company except insofar as the same are repeated or contained in these presents.

INTERPRETATION

2. These Articles shall be construed with reference to the provisions of the Companies Act of the Province of Alberta, and terms used in these Articles shall be taken as having the same respective meanings as they have when used in that Act.

3. In the interpretation of these Articles, except where excluded by the context:

   (a) Words importing the singular number only shall include the plural number and words importing the plural number shall include the singular number;

   (b) Words importing the masculine gender shall include the feminine;

   (c) The words "Alberta home builders" shall have their ordinary meaning and shall include any person, group of persons, partnership, corporation, branches of corporations, subsidiaries of incorporations, or any other entity which genuinely constructs, erects or builds dwelling houses or other buildings accepted by the Company for certification within the Province of Alberta which by reason of separate offices, geographic locations or other reasons pay a separate individual fee to or enters into an individual contract with the Company or is approved for membership by a membership committee of the Company;

   (d) The word "Company" means "NEW HOME WARRANTY PROGRAM OF ALBERTA"

   (e) The word "representative" shall mean a person representing a corporate member attested and appointed by the corporate member to represent the said member either at meetings of the members of the Company or to serve as a Director of the Company. The representative of an associate member shall be referred to as an "associate representative" only but not as a "representative";

   (f) The headings used throughout these Articles are inserted for reference purposes only, and are not to be considered or taken into account in construing the terms or provisions of any Article not to be deemed in any way to qualify, modify or explain the effect of any such provisions or terms.

BUSINESS

4. The business of the Company may be commenced as soon after the incorporation of the Company as the Directors may think fit.

HEAD OFFICE

5. The office of the Company shall be at the City of Edmonton, in the Province of Alberta, or at such place in Alberta as the Directors may from time to time appoint.

MEMBERSHIP AND REPRESENTATIVES

6. (a) The subscribers to the Memorandum of Association of the Company, Len Perry Homes (Edm.) Ltd., Springer Construction (Calgary) Ltd. and Willowbrook Homes (1964) Ltd. and such other persons as shall be admitted to membership in accordance with these Articles of Association, and none others shall be members of the Company and shall be entered in the register of members accordingly;

(b) Members shall be restricted to the following:

(i) Alberta home builders who are members of the Alberta Council of Housing and Urban Development Association of Canada, or any local association in Alberta of the Housing and Urban Development Association of Canada being a body corporate incorporated under the laws of the Provisions of Part 2 of the Company's Act, 1934 of the Dominion of Canada by letters patent dated the 8th day of February, A.D. 1934;

(ii) Alberta home builders who might be approved for membership from time to time by the Board of Directors of the Company or any membership committee duly qualified and empowered to consider applications for membership by the Board of Directors of the Company;

(c) Representatives shall be persons designated by a corporate member who may serve on the Board of Directors of the Company and represent the said member at all general meetings of the Company. A memorandum verifying the appointment of a representative or associate representative and stating for what term the appointment is made shall be received by the Company or one of its officers before the appointee may act. Such appointment shall be executed by and on behalf of the member making the appointment and in the case of associate members and associate representatives shall be signed and executed by the associate member represented. Revocations of appointments shall be signed and executed in the same way and may be made with or without cause or prior notice or either of them. All such memoranda shall be deemed valid and genuine unless contrary be shown. A representative so appointed shall be entitled to exercise all of the rights and powers on behalf of the member he represents as if he were the member.

A representative shall cease to represent a member upon the happening of any one of the following events:

(a) The period of his appointment has expired;

(b) The member represented revokes the appointment and gives the Company notice of revocation of the appointment;

(c) The representative becomes adjudged a mental incompetent;

(d) The member that he represents withdraws or is removed from the Company;

(e) If he becomes convicted of an indictable offence;

(f) If he resigns the office by notice in writing.

RIGHTS OF MEMBERS

7. All members shall be entitled to vote at all properly constituted meetings of the Company and to all such information and advice with regard to the affairs of the Company as the Company or its officers and directors may be able to supply.

8. No right or priviledge of any member shall in any way be transferable or transmissible, but all such rights and priviledges shall cease upon the member ceasing to be such, whether by death, retirement or otherwise.

RETIREMENT OF MEMBERS

9. Any member of the Company who shall desire to retire may terminate his or its membership in the Company forthwith on providing to the Company a notice in writing signifying the said intention to retire. The said notice in writing shall be effective forthwith on receipt thereof by the Company on the understanding that such member shall remain liable under any of his or its contractual responsibilities which may have been made by such member prior to the said notice of retirement. On receipt of the notice, the said member shall thereupon be deemed to have retired and his or its name shall be removed from the list of members by the Secretary of the Company.

ADMISSION OF FURTHER MEMBERS

10. The members may, by majority agreement of the Board of Directors or any committee duly authorized thereunder, to invite any person or persons or corporation to become members of the Company who qualify under Clause 6 of these Articles of Association which members on acceptance shall be entitled to full rights and priviledges of all kinds including voting rights.

ASSOCIATE MEMBERS

11. The members may, by majority agreement of the Board of Directors of the Company or any committee duly authorized thereunder, invite any person or persons or corporation to become associate members of the Company, but such associate members shall serve in an advisory capacity only and shall have no rights or priviledges of any kind including voting rights.

REMOVAL AND DISQUALIFICATION OF MEMBERS OR ASSOCIATE MEMBERS

12. Membership or associate membership in the Company shall continue at the pleasure of the Board of Directors of the Company and any membership or associate membership in the Company may be determined ipso facto as follows:

(a) By a resolution of the Board of Directors of Company;

(b) By a special resolution of the members at large meeting in properly constituted meeting of the Company;

(c) Bankruptcy or insolvency or any arrangement made with the creditors of a member or associate member;

(d) Failure to default in complying with any contractual obligation which a member or associate member may have with the Company;

(e)Default in payment of any fees to the Company or in failing to comply with any reasonable request from the Company for information or documentation required;

(f) Commission of any act which in the unanimous opinion of the Board of Directors of the Company would bring the new home building industry or any of the Company's aims or objects into public disrepute or controversy;

(g) Failure to comply with decision of a properly constituted conciliation proceeding under the New Home Warranty plan of Alberta unless such decision is before the Courts for final determination.

Members and associate members who are removed or disqualified under this Article shall have the right of recourse to the Courts of the Province of Alberta or any other legal remedies which might be available to him under the laws of the Province of Alberta for an adjudication with respect to the merits of the said removal or disqualification proceedings both as to facts and law.

VOTING AND PROCEEDINGS AT GENERAL MEETINGS OF MEMBERS

13. (a) Voting priviledges shall be confined to the members only;

(b) Associate members may participate fully in discussions in general and committee meetings and in bringing the matters to the resolution stage;

(c) A mail vote may be taken in the event of urgent matters which cannot reasonably await the next regular meeting of the members. The procedure for taking a mail vote shall be as may be decided by the Board of Directors, or if they have not done so, then by the Chairman, or failing him, by the Secretary. Such procedure shall include adequate notice to each member and shall otherwise also be in accordance with natural justice or fairness;

(d) In any general meeting of the Company a resolution may be passed by a simple majority vote other than those matters requiring a special resolution for a determination;

(e) Vote may be given by person or by proxy at general meetings of the Company;

(f) A member may appoint a proxy to represent him at a general meeting of the Company;

(g) Every instrument appointing a proxy, whether for a specified meeting or otherwise, shall as nearly as circumstances will permit, be in the form or to the effect following:

"I _____ of _____

_____ being the representative of _____

_____ being a member of the New Home Warranty Program of Alberta hereby appoint _____ and failing him, _____ of _____

_____ as my proxy to vote for me and on my behalf at the meeting of the Company to be held on the _____ day of _____ and at every adjournment thereof, and at every poll which may take place in consequence thereof.

As witness my hand this _____ day of _____

_____ A.D. 19 ___.

_____
Witness

The decision of the Chairman of any general meeting as to the validity of any instrument of proxy shall be final and conclusive.

(h) At every general meeting every question shall be decided in the first instance by a show of hands, unless before or upon the declaration of the result of the show of hands, a poll be demanded by at least two (2) members present personally or by proxy and entitled to vote, or as may in special instances be required by the Statutes. A declaration by the Chairman that a resolution has been carried or carried by a particular majority, or lost, shall be conclusive and an entry to that effect in the book of proceedings of the Company shall be conclusive evidence thereof, without proof of the number of proportion of the votes recorded in favor of, or against such resolution;

(i) If a poll be demanded in the manner above mentioned, it shall be taken at such time and place and in such manner as the Chairman may direct, and the result of such poll shall be deemed to be the resolution of the general meeting at which the poll was demanded. In the case of an equality of votes at any general meeting, whether upon a show of hands or at a poll or a mail vote, the Chairman shall be entitled to a second or casting vote. In case of any dispute as to the admission or rejection of any vote, the Chairman shall determine the same, and such determination made in good faith shall be final and conclusive. A demand for a poll may be withdrawn;

(j) A poll may be demanded upon the election of a Chairman, or upon a question of adjournment, and such poll shall be taken forthwith without adjournment. Any business other than that upon which a poll has been demanded may be proceeded with pending the taking of the poll;

(k) At every general meeting:

(i) Upon a show of hands every member present in person, or by proxy, and entitled to vote shall, save as to the casting of the Chairman, have one (1) vote only;

(ii) Upon a poll every member present in person or by proxy and entitled to vote shall, save to the casting vote of the Chairman have one (1) vote;

(l) At any general meeting, if all the members entitled to vote thereat are present, either in person or by proxy, they may waive the necessity of the giving of any previous notice of such meeting and an entry in the Minutes of such meeting of such waiver shall be sufficient evidence of the due convening of the meeting;

(m) Members present and entitled to vote thereat shall be a quorum at a general meeting for the choice of a Chairman and the adjournment of the meeting. For all other purposes the quorum for a general meeting shall be members personally present and entitled to vote thereat, not being less than six in number. No business shall be transacted at a general meeting unless the quorum requisite shall be present at the commencement of the business;

(n) If Fifteen (15) minutes after the time appointed for the holding of a general a quorum be not present, the meeting, if convened upon requisition of members, shall be dissolved. In any other case, it shall stand adjourned to the same day in the next week at the same time and place; and if at such adjourned meeting quorum be not present, those members who are present and entitled to vote thereat shall be deemed to be a quorum and may transact all business which a full quorum might have done;

(o) The Chairman of the Company shall preside as Chairman at every general meeting and in his absence the Vice-Chairman, and if neither of these be present, or if at any meeting they be not present within Fifteen (15) minutes after the time appointed for holding the meeting, the members present and entitled to vote thereat shall choose one of the Board present and willing to take the chair, to be Chairman;

(p) Following a resolution of adjournment of the members passed by a simple majority of those present and entitled to vote, the Chairman may adjourn the general meeting from time to time and from place to place, but no business shall be transacted at any adjourned meeting other than the business left unfinished at the meeting from which the adjournment took place;

(q) Notwithstanding anything to the contrary in these Articles, a resolution assented to and adopted in writing under the hands of all the members entitled to vote thereon, though not passed at a general meeting, shall be of the same force and effects as if it had been duly passed at a general meeting duly convened, and no previous notice, or convening of any general meeting for the purpose of passing such resolution shall in such case be deemed to have been necessary whether the business transacted thereat is special or not, and a member may signify his assent to such resolution in writing under his hand or by telegram or cable. Provided that if the resolution be signed or assented to in writing or by telegram or cable by a member, it need not be signed or so assented to be any representative of such member;

(r) Ten (10%) per cent or more of the total number of members in good standing registered as members of the Company at any time may require a general meeting of the Company. The Secretary or Chairman, (whichever is applicable) must thereafter serve on all of the members of the Company a notice of a meeting to be held within a period of seven (7) days next following the receipt of the said memorandum, stipulating a time and place of the meeting. The Chairman may call a general meeting of the Company at any reasonable time.

DIRECTORS AND OFFICERS

14. (a) The affairs of the Company shall be managed by a Board of Directors of not less than Five (5) Directors nor more than Fifty (50) Directors and in the event the number of Directors being less than the minimum aforesaid they shall do not act other than to call a general meeting of the Company until the number of Directors has been made up to the said minimum;

(b) The Directors may be selected from among the members or representatives in good standing of the Company at the time of the appointment of the Board of Directors. The Company empowers the Executive Committee of the Housing and Urban Development Association of Canada, Alberta Council, to appoint the Board of Directors from time to time. The first Board of Directors shall be selected and appointed from the following sources, namely;

(i) There shall be Nine (9) Directors nominated by local associations of the Housing and Urban Development Association of Canada, Alberta Council on the understanding that the said local associations located within the Province of Alberta shall be entitled as a matter of right to the number of Directors set out opposite to each as follows:

The Edmonton Association - Three (3) Directors
The Calgary Association - Three (3) Directors
The Grande Prairie Association - One (1) Director
The Red Deer Association - One (1) Director
The Lethbridge Association - One (1) Director
The Medicine Hat Association - One (1) Director

(ii) Two (2) Directors at large;

(iii) The Chairman of the Housing and Urban Development Association of Canada, Alberta Council, who shall serve as a Director during his term of office as Chairman of the said Council;

(iv) The immediate past Chairman of the Board of Directors of the New Home Warranty Program of Alberta shall serve as a Director for a term to continue until a subsequent past Chairman is available to fill such office;

(c) The term of office for Directors shall be a term of Two (2) years from the date of their appointment with the exception of the first Board of Directors in which case Five (5) of the first Directors shall be appointed for a term of One (1) year and the balance of the Board of Directors for a term of Two (2) years, thereafter Directors whose term of office has expired shall be appointed for a term of office for Two (2) years;

(d) The number of Directors up to the maximum aforesaid may be increased from time to time to represent new local associations of the Housing and Urban Development Association of Canada, Alberta Council, formed in the Province of Alberta or to reflect an increased membership in any existing local association of the Housing and Urban Development Association of Canada, Alberta Council, from time to time, in the discretion of the Executive Committee of the said Housing and Urban Development Association of Canada, Alberta Council;

(e) The Executive committee of the Housing and Urban Development Association of Canada, Alberta Council, may by special resolution, remove any Director before the expiration of his period of office and may by ordinary resolution appoint another person in his stead provided the aforesaid local association retain their representation as hereinbefore set forth. The person so appointed shall hold office during such time only as the Director in whose place he is appointed would have held the same if he had not been removed;

(f) A retiring Director shall be eligible for a re-appointment to the Board of Directors:

(g) The Directors shall be paid their approved travelling expenses of attending and returning from general meeting of the Board of Directors or any Committee thereof or otherwise in connection with the Company's business;

(h) The persons signing as subscribers to the Memorandum of Association of the Company shall be Provisional Directors of the Company.

POWERS OF DIRECTORS

15. (a) The business of the Company shall be managed by the Board which may pay all such expenses of and preliminary and incidental to the promotion, formation, establishment and registration of the Company as it thinks fit, and the issue of debentures and bonds, or other securities of the Company, including brokerage and commission for obtaining or guaranteeing applications for, or placing debentures or securities, and the Board may exercise all such powers of the Company, and do on behalf of the Company all such acts as may be exercised and done by the Company and as are not by the Statutes or these Articles required to be exercised or done by the Company in general meeting; subject, nevertheless, to the provisions of the Statutes and of these Articles and to any regulations not being inconsistent with these Articles, from time to time, made by the Company in general meeting, provided that no such regulations shall be invalidate any prior act of the Board which would have been valid if such regulations had not been made, and subject to such limitations as may from time to time be imposed by general meeting;

(b) The Board may hire a manager and other executive personnel of the Company and the manager may employ and discharge personnel not of executive or professional status;

(c) The Board may hire and discharge personnel of an executive or professional status.

DISQUALIFICATION OF DIRECTORS

16. The office of a Director shall be ipso facto vacated:

(a) if he becomes of unsound mind or be found a lunatic;

(b) If he becomes convicted of an indictable offence;

(c) if by notice in writing he resigns his office;

(d) if he shall cease to hold his qualification as a representative of a member of the Company;

(e) if he or the member which represents ceases to hold his or its qualification as a nominee of a local Alberta association of the Housing and Urban Development Association of Canada.

PROCEEDINGS OF DIRECTORS

17. (a) The Board may meet together for the dispatch of business, adjourn and otherwise regulate its meetings as it shall think fit. For the transaction of business a majority of the Board shall constitute a quorum. Questions arising at any meeting shall be decided by a majority of votes, in the case of an equality of votes, the Chairman of the meeting shall have a second or casting vote in addition to his ordinary vote;

(b) A properly constituted meeting of the Board for the time being at which a quorum is present shall be competent to exercise all or any of the authorities, powers and discretions by or under these Articles for the time being vested in or exercisable by the Board.

(c) Meetings of the Board may be summoned by the Secretary at the request of the Chairman and failing him, at the request of a Vice-Chairman or a Director. A meeting of the Board may be held at any time the Board may deem necessary and expedient and may be summoned on seven (7) days notice, verbally or in writing and whether by means of telephone or telegraph, or any other means of communication;

(d) Notwithstanding anything to the contrary herein contained, for the first meeting of the Board held immediately after the appointment of Directors by the said Executive Committee of the Housing and Urban Development Association of Canada, Alberta Council, no formal notice of such meeting of the Board shall be necessary provided that a quorum of Directors be present;

(e) Meetings of the Board shall be held at the head office, or with consent of a majority of the Board, at any other place;

(f) All acts done by any meeting of the Board or of a committee of the Board, or by any persons acting as Directors, shall notwithstanding that it be afterwards discovered that there was some defect in the appointment of any such Directors, or persons acting as aforesaid, or that they or any of them were disqualified, be as valid as if every such person had been fully appointed and was qualified to be a Director;

(g) A resolution signed by all the members of the Board as such, shall be as valid and effectual as if it had been passed at a meeting of the Board duly called and constituted and shall be entered in the Minute Book of the Company accordingly and shall be held to relate back to any date therein stated to be the date hereof.

EXECUTIVE COMMITTEE

18. The Executive Committee and the officers of the Company shall consist of the Chairman, two Vice-Chairman, the Chairman of the Housing and Urban Development Association of Canada, Alberta Council and a Secretary together with any additional members at large which the Board may wish to appoint from time to time. The said Executive Committee is hereby vested with authority to exercise all of the powers of the Board while such Board is not in session except such powers as by the statutes are required to be exercised by the Board. The said Executive Committee may meet at stated times or on notice to all or any of their own number and such committee shall advise and aid the Board in all matters concerning the Company's interests and in the management of its business and affairs and generally perform such duties and exercise such powers as may be directed or delegated to such committee by the Board from time to time. A quorum of the Executive Committee shall consist of not less than three (3) of their number and the Executive Committee may act by the written consent of a quorum thereof although not formally convened. The Executive Committee shall keep minutes of its proceedings and report the same to the Board at the next meeting thereof.

THE CHAIRMAN

19. (a) The Board, from time to time, may elect from among its number a Chairman;

(b) The Chairman shall be the senior officer of the Company, and preside at all general meetings and shall also preside at meetings of the Board. He shall have general and active management of the business and affairs of the Company, and without limitation to the foregoing:

(i) he shall have the general superintendence and direction of all the officers of the Company;

(ii) he shall submit the annual report of the Board, if any, and the annual balance sheets and financial statements of the business and affairs and reports on the financial position of the Company as required by the Statutes to the annual general meeting and from time to time he shall report to the Board all matters with his knowledge which the interest of the Company requires to be brought to their attention;

(iii) he shall be ex-officio a member of all standing committees.

THE VICE-CHAIRMAN

20. The Board, from time to time, may also appoint from among its numbers two (2) Vice-Chairman, in whom shall be vested all the powers and who shall perform all the duties of the Chairman in the absence of the latter from his office and who may also preside at meetings of the Board in the absence of the Chairman of the Board. Nothing, however, contained in these Articles shall prevent any Director from presiding at meetings of the Board.

THE SECRETARY

21. (a) The Board may appoint a Secretary from among its number. In addition the Board may appoint an Assistant Secretary or Assistant Secretaries who need not be a member or members of the Board. The Secretary or an Assistant Secretary shall attend meetings of the Board and general meetings and record the proceedings thereof and all matters transacted and dealt with thereat, and shall prepare and keep minutes of all such meetings and record all votes and the minutes of all proceedings in a book or books to be kept for that purpose, and shall perform like duties for any standing or Executive Committee when required;

(b) The Secretary or an Assistant Secretary shall give or cause to be given notice of all general meetings and meetings of the Board and shall perform such other duties as may be prescribed by the Board.

BORROWING POWERS

22. (a) The Board may, from time to time, at its discretion raise or borrow money for the purpose of the Company's business and/or may secure the re-payment of the same by mortgage or charge upon the undertaking and the whole or any part of the assets and property of the Company (present and/or future) and may issue bonds, debentures stock payable to bearer or otherwise give and grant security under the Bank Act and generally raise or borrow money for the purposes of the Company, secured or charged upon the whole or any part of the assets and properties of the Company, or otherwise as may be advisable or necessary in the interest thereof;

(b) One of more directors or officers of the Company may be authorized by the Board to sign and execute all documents and assurances necessary to fulfill the Board's discretion to raise or borrow money as provided in Clause 22(a) hereof. Upon request of the Board, the Secretary will duly certify a copy of the Minutes of the Board of Directors authorizing such signing authority;

(c) Any bonds, debentures, or other securities, issued or to be issued by the Company, shall be under the control of the Board, which may issue them assignable free from any equities between the Company and the person to whom the same may be issued and/or upon such other terms and conditions and in such manner and for such consideration as it shall consider to be for the benefit of the Company;

(d) Any bonds, debentures, debenture stock or other securities may be issued at a discount, premium or otherwise and with or without any special priviledge as to redemption, surrender, drawing, conversion or otherwise;

(e) If the Board, or any member or members thereof, or any other person, shall become personally liable for the payment of any sum primarily due from the Company, the Board may execute or cause to be executed any mortgage, charge or security over or affecting the whole or any part of the assets of the Company by way of indemnity to secure the Board or any such member or members thereof or person so becoming liable as aforesaid, from any loss in respect of such liability;

(f) The Company shall comply with the requirements of the Statutes in respect of filing or registering such mortgages and charges as are herein mentioned, and where necessary, the Company shall keep a register of mortgages as required by the Statutes.

COMPANY SEAL

23. (a) The Company shall have a corporate seal of such design as may be approved by the Board;

(b) The seal shall be affixed to all documents, requiring execution under the corporate seal of the Company, by the Chairman and the Secretary or by such party or parties as may be authorized, from time to time, by the Board;

(c) The seal shall be kept in charge of the Company solicitors, the Secretary or other person appointed by the Board and shall be used as in Articles provided.

BOOKS OF THE COMPANY

24. (a) The Board shall cause minutes to be made in books provided for that purpose;

(i) of all appointments of officers made by the Board;

(ii) of the names of the Directors present at each meeting of the Board;

(iii) of all resolutions and proceedings of all general meetings and meetings of the Board;

and any such minutes as aforesaid if purporting to be signed by the Chairman of the meeting at which such appointments were made, or such Directors were present, or such resolutions were passed or proceedings had (as the case may be) or by the Chairman of the next succeeding general meeting or meetings of the Board or executive committee (as the case may be) shall be sufficient evidence without any further proof of the facts therein stated;

(b) The Secretary shall keep or cause to be kept a book or books wherein shall be recorded:

(i) A copy of the Memorandum of Association of the Company and these Articles of Association and any amendments thereto;

(ii) The full names, alphabetically arranged or alphabetically indexed, addresses and occupations of the subscribers of the Memorandum, and of the members and of every other person who becomes representatives of a member of the Company;

(iii) The date at which each person was entered in the register as a representative and the date at which each institution or entity became a member.

(iv) The date at which any person ceased to be a representative or a member;

(v) The full names, addresses and other occupations, if any, of the Directors, officers, and managers of the Company, the date on which each was appointed and the date on which each ceased to hold office as Director or manager.

INSPECTION OF BOOKS AND ACCOUNTS

25. The books, accounts and records of the Company shall be open to inspection by any member at all reasonable times.

ACCOUNTS

26. (a) The Board shall cause true accounts to be kept:

(i) of the sums of money received and expended by the Company and the matters in respect of which such receipts and expenditures take place;

(ii) of all sales and purchases of goods services by the Company; and

(iii) of the assets and liabilities of the Company.

(b) The books of account shall be kept at the registered office or at any such place or places as the Board may determine;

(c) At the annual general meeting every year, the Board shall lay before the Company a balance sheet and a profit and loss account and the auditor's report made up and submitted in accordance with the Statutes;

(d) Every such Balance Sheet and account shall be accompanied by a report of the Board as to the state and condition of the Company, and the Balance Sheet, accounts and report shall be signed by two Directors.

27. (a) The Company at each annual general meeting shall appoint an auditor or auditors to hold office until the next annual general meeting and his or their appointment, renumeration, rights and duties shall by regulated by the Statutes;

(b) The accounts of the Company when audited and approved by a general meeting shall be conclusive except as regards any error discovered therein within three (3) months next after the approval thereof. Whenever such error is discovered within that period, the accounts shall forthwith be corrected and thenceforth shall be conclusive.

NOTICE

28. (a) A Notice may be served by the Company on any member entitled thereto either personally or by sending it through the post in a pre-paid envelope or wrapper to such member at his registered place of address;

(b) If a member has no registered place of address, notice served on the member at his last known address shall be deemed good notice on such member at the expiration of twenty-four (24) hours following receipt of such notice by the member;

(c) Any notice sent by post shall be deemed to be served on the second day following that upon which the letter, envelope or wrapper containing the same is posted, and in proving such service it shall be sufficient to prove that the envelope or wrapper containing the notice was properly addressed and put into the Post Office;

(d) The signature to any notice to be given by the Company may be lithographed, written, printed or otherwise mechanically reproduced;

(e) When a given number of day's notice or notices extending over any other period are required to be given, the day of service shall, and the day upon which such notice expires shall not, be included in such number of days or other period;

(f) Notwithstanding anything to the contrary in these Articles contained, any member or Director entitled to receive notice may by instrument in writing signed by such member or Director waive any such notice on such items and conditions, if any, as such member or Director may deem fit.

WINDING-UP

29 The Company may be wound up voluntarily whenever a special resolution is passed requiring the Company to be so wound up.

30 All property, funds or securities of all kinds whatsoever accruing to the Company on completion of the winding up and liquidation procedure in accordance with the laws of the Province of Alberta, shall be disbursed only to recognized organizations in Canada having reasonably similar objects to those of the Company and no part of such funds or assets shall be paid to or on behalf of any member or associate member of the Company or its liquidator and in the event that such Company is not in existence upon winding up of the Company, then in such event on dissolution, to distribute the property or assets of the Company after the payment and satisfaction of all debts and liabilities to such educational, charitable or benevolent organizations as may be decided by the members providing such organizations have objects acceptable to the members.

INDEMNITY TO DIRECTORS AND OTHER

31. No director or officer of the Company shall be liable for the acts, receipts, neglects, or defaults of any other director or officer, or for joining in any receipt or other act for conformity or for any loss or expenses happening in the Company through insufficiency or deficiency of any security in or upon which any of the moneys of the Company shall be invested, or for any loss or damage arising from the bankruptcy, insolvency or tortious act of any person with whom any money, securities or effects shall be deposited, or for any other loss occasioned by error of judgement, or oversight on his part, or for any other loss, damage or misfortune whatever, which shall happen in the execution of the duties of his office, or in relation thereto, unless the same shall happen through his own dishonest, willful neglect or serious disregard of duty.

APPENDIX F

AGREEMENT WITH BUILDER

APPENDIX F

AGREEMENT WITH BUILDER

NEW HOME WARRANTY

THIS AGREEMENT MADE BETWEEN:

NEW HOME WARRANTY PROGRAM OF ALBERTA, 201, 208 - 57th Avenue S.W., Calgary, Alberta T2H 2K8, a body corporate, carrying on business in the Province of Alberta (hereinafter called "the Program")

OF THE FIRST PART

—and—

_____
(full name)

_____

_____

_____

of _____
(postal address)

(hereinafter called "the Builder")

OF THE SECOND PART

1. INTERPRETATION

In this Agreement:

(a) "purchaser" means a person who pays a deposit to, or contracts with the Builder for the purchase or construction on real property of a residential unit in the Province of Alberta.

(b) "residential unit" means a building or part of a building which is capable of ownership separate from the ownership of the other part or parts of the building used or intended to be used for residential purposes, newly constructed by the Builder and permanently, or through another part or parts of the building, attached to a permanent foundation located in Alberta which is constructed for sale which includes:
- (i) a single detached unit,
- (ii) a duplex unit,
- (iii) a semi-detached unit,
- (iv) a row housing unit,
- (v) a mobile home,
- (vi) a newly constructed residential condominium unit as defined by the Condominium Property Act, Chapter 62, Revised Statutes of Alberta 1970 and amendments thereto.

(c) "common property" means so much of a parcel of land as is not comprised in any residential unit shown on a condominium plan covering the same land.

(d) "Condominium Corporation" means a body incorporated under the Condominium Property Act, Chapter 62, Revised Statues of Alberta 1970 and amendments thereto.

(e) "date of possession" means:
- (i) In the case of any residential unit excepting residential condominium units and common property the date set forth as the date of possession in the Certificate of Possession and Warranty hereinafter referred to,
- (ii) In respect of residential condominium units for all warranties excepting major structural defects the date set forth as the date of possession in the Certificate of Completion and Possession hereinafter referred to and,
- (iii) In respect of common property and warranties arising from major structural defects affecting residential condominium units the date upon which the common property is substantially completed as defined in the Condominium Property Act, Chapter 62, Revised Statutes of Alberta 1970 and amendments thereto.

(f) "Warranty" means the coverage outlined on the reverse of the Certificate of Possession and Warranty which is issued by the Builder to the purchaser on the date of possession. The Warranty sets forth the warranty obligations of the Program and the Builder in respect of the residential unit described in the Certificate of Possession and Warranty. The Warranty shall be in a form hereto annexed as Schedule "A" or as may be determined by the Program from time to time.

(g) "Condominium Property Warranty" means the document issued by the Program to a Condominium Corporation immediately following the date of possession setting forth the warranty obligations of the Program and the Builder in respect to the condominium property described in such document. The Condominium Property Warranty shall be in a form hereto annexed as Schedule "B" or as may be determined by the Program from time to time.

(h) "Deposit Receipt" means excepting in the case of condominiums the receipt of the Program to be issued by the Builder to a purchaser upon receipt of deposit monies paid to a Registered Builder in a sum not exceeding Program limits and in a form hereto annexed as Schedule "C" or as may be determined by the Program from time to time.

(i) "New Condominium Home Pre-Completion Receipt" (hereinafter referred to as a "Pre-Completion Receipt") means the receipt of the Program to be issued by the Builder to a Purchaser of a residential condominium unit under a purchase agreement, for monies advanced other than rents, security deposits or mortgage advances in a sum not exceeding Program limits in a form hereto annexed as Schedule "D" or as may be determined by the Program from time to time.

(j) "renewal date" means a date established by the Program not later than 90 days from the end of the fiscal period of the Builder.

(k) "major structural defect" means those major structural defects as defined in Schedules "A" and "B" annexed hereto.

2. **BUILDER COVENANTS**

(a) The Builder covenants that he has read and understands the Memorandum and Articles of Association of the Program and he agrees that he shall be bound by such Memorandum and Articles of Association and he further agrees that if in the opinion of the Board of Directors of the Program he, in any way, contravenes the said Memorandum and Articles, his membership in the Program shall cease and he shall no longer be deemed a member in good standing of the Program.

(b) The Builder covenants that all information supplied by him is complete and accurate in respect to any applications, renewals or any other material provided to the Program.

(c) The Builder shall construct each residential unit in accordance with the Alberta Building Code, and in accordance with the building standards prescribed by the local authority having jurisdiction in the municipal district in which the residential unit is constructed or as prescribed in the plans and specifications where such standards exceed the above requirements.

(d) Whenever required as part of the construction of a residential condominium, the Builder shall construct all common property, in accordance with the Alberta Building Code and the standards set by the local authority having jurisdiction or as prescribed in the plans and specifications where such standards exceed the above requirements. Where these standards are not applicable, the Builder shall construct in accordance with construction standards prevailing from time to time in the Province of Alberta.

(e) The Builder agrees that the warranties set forth in the Warranty and Condominium Property Warranty shall be fully binding and of full force and effect upon the builder, notwithstanding title may not have passed to the purchaser.

(f) The Builder agrees that the Warranty obligations arising against him shall survive any termination of this Agreement.

(g) The Builder agrees that any costs, expenses or damages incurred by the Program resulting from a default under this Agreement by the Builder shall be a charge against any lands owned by the Builder from time to time. Such charge may be protected by Caveat only under the provisions of clause 11(d).

(h) The Builder agrees that all material provided to the Program shall remain the property of the Program.

(i) The Builder shall not make representations to the public requiring the Program to do anything beyond the coverage and limits of the Program.

(j) The Builder agrees that where a purchaser is owner or in control of land upon which the Builder is contracting to construct a home he will request permission to conduct soil tests and if permission is refused will advise the purchaser of the limitation contained in Paragraph 5(b) of Schedule "A".

(k) The Builder undertakes and agrees that he carries on the construction of residential units only under the name of the Registerd Builder named in this Agreement, and the Builder covenants and agrees that he will not in any capacity carry on new construction of residential units in any other company, partnership, joint venture, firm or any other name unless he first makes full disclosure forthwith of such housebuilding enterprise to the Program and undertakes to make application to the Program for a separate membership for such other outside housebuilding enterprise.

3. **INSPECTIONS**

(a) If requested to do so the Builder shall advise the Program upon the completion of the footings, the framing and the interior finish and such other stages of construction as may be specified by the Program.

(b) The Builder shall grant to the Program's inspectors full access to each residential unit at all reasonable times prior to the date of possession by the purchaser.

(c) If the residential unit is not constructed in a municipality in which the Program maintains an office, the Builder may be required to pay an inspection fee for each inspection which the Program conducts.

4. **ENROLLMENT**

(a) The Builder shall enroll with the Program each residential unit and any associated common property which it commences to construct after the date of this Agreement.

(b) The Program may require the builder to enroll with the Program all unsold (and sold but unpossessed) residential units which it commenced to construct prior to the date of this Agreement.

(c) All residential units and any associated common property shall be enrolled not later than upon receipt of a building permit by submitting to the Program:

(i) A completed enrollment form as may be prescribed by the Program from time to time;

(ii) An enrollment fee as established from time to time by the Program;

(iii) Where applicable, an extended major structural defect warranty enrollment fee.

(d) Where a Deposit Receipt or Pre-Completion Receipt is issued by the Builder prior to applying for a building permit, the builder shall submit forthwith to the Program the designated copies of the Deposit Receipt or Pre-Completion Receipt with the appropriate enrollment form and fee.

(e) In the event the Builder fails to enroll residential units or common property within the time prescribed by the Program, the Program upon written notice may assess an administration fee against the Builder, the amount of which the Program may determine from time to time.

(f) In the event a residential unit shall remain unsold or uncompleted for a period of two (2) years from the date of its initial enrollment the Program may, at its discretion, upon notice to the Builder, require an additional enrollment fee to be paid to the Program or alternatively the Program may cancel the enrollment without refund of the enrollment fee.

5. **ISSUE OF DEPOSIT RECEIPTS OR PRE-COMPLETION RECEIPTS**

(a) The Program shall provide the Builder with a supply of Deposit Receipts or Pre-Completion Receipts.

(b) Except in cases of a deposit made to a licensed real estate agent, upon the receipt of any deposit or Pre-Completion funds with respect to any residential unit, the Builder shall complete and execute a Deposit Receipt or Pre-Completion Receipt not exceeding Program limits and shall have the purchaser execute the same and shall countersign on behalf of the Program.

(c) The Builder shall deliver two copies of such Deposit Receipt or Pre-Completion Receipt to the purchaser who shall submit the designated copy to the Program.

(d) The Builder shall not, under any circumstances, issue a Deposit Receipt or Pre-Completion Receipt in respect of a residential unit which is not enrolled in the Program except as provided under 4(d) above.

6. **COMMENCEMENT OF PROGRAM WARRANTY**

(a) (i) Upon granting possession of a residential unit, the Builder shall, duly complete and execute a Certificate of Possession and Warranty in such form as may be prescribed by the Program from time to time. The Builder shall furnish the purchaser with a copy of such Certificate of Possession and Warranty and shall immediately forward the designated copy of the certificate to the Program.

(ii) In the case of common property, the Builder shall on or by the date of possession duly complete and execute a "Certificate of Completion and Possession, Condominium Common Property" in such form as may be prescribed by the Program from time to time. The Builder shall furnish the Condominium Corporation with a copy of said Certificate of Completion and Possession, Condominium Common Property and shall immediately forward a copy of such certificate to the Program.

(iii) Upon receipt of the foregoing documents, the Program undertakes to honor the terms of its Warranty if the Builder fails to do so.

and to evidence such undertaking the Program shall issue to the purchaser:

(1) In the case of a residential unit, excluding residential condominium units a Warranty in the same form as Schedule "A" or as may be prescribed by the Program from time to time;

(2) In the case of a residential condominium unit a Condominium Property Warranty in the same form as Schedule "B" or as may be prescribed by the Program from time to time.

(b) The Builder hereby authorizes the Program to execute the Warranty or Condominium Property Warranty on its behalf.

7. BUILDER INDEMNIFICATION

(a) The Builder shall indemnify and save harmless the Program from any loss which the Program incurs:

(i) As a result of any liability of the Program to a purchaser under a Deposit Receipt or Pre-Completion Receipt;

(ii) As a result of default by the Builder in the performance of its obligations arising under the Warranty or Condominium Property Warranty during the first one (1) year period commencing on the date of possession;

(iii) By warranting the residential unit and/or common property against major structural defects as set forth in the Warranty or Condominium Property Warranty arising during the second to fifth years inclusive after the date of possession and where applicable during the sixth to tenth years inclusive of the extended major structural defect warranty, PROVIDED ALWAYS that this indemnification shall apply only in cases where major structural defects result from a provable act of negligence on the part of the Builder.

(iv) Any loss which the Program incurs as a result of administrative costs and legal costs to the Program arising from litigation against the Builder including solicitor and client costs.

(b) Notwithstanding any termination of this Agreement, the foregoing indemnities by the Builder shall nevertheless remain in full force and effect.

(c) Should any loss occur to the Program arising out of a default or negligent act of a third party, the Builder hereby agrees that it shall subrogate its right of action, if any, against any third party to and in favour of the Program.

8. CONCILIATION

(a) The Builder agrees to postpone its right of recourse to the Courts on any Warranty dispute between the Builder and the purchaser until completion of the conciliation procedure set forth in the Warranty or Condominium Property Warranty.

(b) The Program shall appoint a conciliator to act in any dispute arising between the Builder and the purchaser in any matter relating to the warranty of the Builder as contained in the Warranty or Condominium Property Warranty.

(c) If conciliation procedures are instituted by the purchaser and the decision of the conciliator is in favour of the purchaser, the Builder may be required to pay the Program a conciliation fee as established from time to time by the Program which shall be refunded to the Builder if the decision of the conciliator is subsequently reversed by a court of competent jurisdiction.

(d) If conciliation procedures result in a decision of the conciliator in favour of the Builder, or if a Builder fully complies with a Conciliation Report, the Program may defend the Builder and conduct an action at law or in equity at its sole expense brought against the Builder to recover under the terms of the Builder's warranty.

9. TERM

(a) This Agreement shall be in force for a period ending on its renewal date.

(b) This Agreement may be renewed from year to year for up to additional one (1) year periods commencing on the renewal date of this Agreement subject to the terms and conditions specified by the Program.

10. DEFAULT BY THE BUILDER

The Builder shall be in default under this Agreement upon any of the following events:

(a) If the Builder shall default in the payment of any monies owing to the Program;

(b) If the Builder shall neglect to carry out or observe any agreement, covenant or condition herein contained on the part of the Builder to be observed or performed or should the Builder fail to comply with any rules or regulations made by the Program under the terms of this Agreement or should the Builder fail to comply with any other requirements set forth in the Memorandum and Articles of Association of the Program;

(c) If an order shall be made or an effective resolution shall be passed for the winding up or liquidation of the Builder;

(d) If the Builder shall make a general assignment for the benefit of its creditors or shall commit an act of bankruptcy or if a custodian or a receiver-manager or any other officer with similar powers shall be appointed of the Builder or of the property of the Builder or of any part thereof;

(e) If an encumbrancer shall take possession of any property of the Builder which is, in the opinion of the Program, a substantial part of the Builder's property or if a distress or execution or a similar process shall be levied or enforced against such property.

11. TERMINATION

(a) The parties hereto mutually agree that this Agreement shall terminate at the option of the Program upon the happening of any of the following events:

(i) If the Builder ceases for any reason to remain a member in good standing of the Program;

(ii) If the Builder shall default in any of the covenants, terms or conditions set forth in this Agreement.

(b) In the event of termination under 11(a), the Program may also, at its option, terminate the membership of:

(i) any subsidiary;

(ii) any firm in which the terminated Builder holds a 10% or more ownership interest;

(iii) any officer of the terminated Builder or any principal having 10% or more ownership interest in the terminated Builder where such officer or principal is also registered with the Program in his own name;

(iv) any firm in which an officer of the terminated Builder is also an officer or holds 10% or more ownership interest; and

(v) any firm in which an owner of 10% or more interest in the terminated Builder is an officer, holds 10% or more ownership interest, or controls the day-to-day business operations.

(c) Should the Program not, in its discretion, exercise its option to terminate this Agreement such action shall not operate as a waiver of the right of the Program to exercise its said option at any time thereafter for the first or any subsequent defaults of the Builder under this Agreement.

(d) In the event of termination of this Agreement, the Builder acknowledges, undertakes and agrees to cease the use or public display of any material bearing the Program's Registered Trade Mark or other identification and that all documentation, paper writings, receipts or other materials furnished to the Builder by the Program remain the property of the Program and shall immediately be returned by the Builder to the Program on demand by the Program.

(e) In the event of termination of this Agreement any residential unit or condominium project enrolled but not sold on the date of termination of this Agreement, may be removed from enrollment and such enrollment fees may be deemed to be earned in full by the Program. Further, the Builder shall not hold out such residential units or condominium property as eligible for Warranty by the Program. However, the Program shall have the right to file a Caveat at the date of termination of the said Agreement under Clause 2(g) only as a condition of not exercising its right to remove from enrollment.

12. RULES AND REGULATIONS

The Builder covenants that the Program may, from time to time during the currency of this Agreement, make reasonable rules and regulations to better define or carry out the intent of this Agreement and in all such cases, the Builder agrees that such rules and regulations together with all of the relevant provisions contained in the Memorandum and Articles of Association of the Program shall be binding upon the Builder as if the same formed part of this Agreement. Without limiting the generality of the foregoing, the builder undertakes and agrees to comply with all rules and regulations of the Program pertaining to full disclosure and all other matters, things or information as might be required by the Program from time to time during the currency of the Agreement.

13. REGISTERED BUILDER

During the currency of this Agreement, the Builder shall be entitled to use or display the term "Registered Builder", and use or display any of the materials bearing the Program's Registered Trade Mark or other identification and to use all documentation, paper writings, receipts or other material furnished by the Program.

14. NOTICES

(a) Any notice or communication may be served upon a party to this Agreement by either delivering it or forwarding it by mail to the address of the other party. Any notices sent by mail shall be deemed to be received by the other party seven (7) days next following the date of mailing. The addresses of the parties are as shown on the face hereof.

(b) Either party may change its address to another address within the Province of Alberta by giving fourteen (14) days notice of the change to the other party. All notices and communications between the parties shall be in writing.

15. ASSIGNMENT

(a) The Builder shall not assign this Agreement or any of its rights hereunder.

(b) The Builder undertakes that it will immediately notify the Program of any change in its identity or ownership.

16. SAVINGS CLAUSE

In the event any of the covenants, clauses or provisions of this Agreement are held by any competent authority to be individually void or unenforcable, the parties hereto agree that the remaining covenants, clauses or provisions of the Agreement remain in full force and effect.

(To be completed by the Program)

DATED this _____ **day of** _____ **A.D. 19** _____. **Registered Builder No.** _____

NEW HOME WARRANTY PROGRAM OF ALBERTA

SEAL

PER: _____

PER: _____

SEAL

THE BUILDER: _____

PER: _____

PER: _____

RB11 - 01/86

SCHEDULE "A" — WARRANTY

INTERPRETATION

1 In this Warranty

(a) "Builder" means the Builder named in the Certificate of Possession and Warranty;

(b) The "Program" means the New Home Warranty Program of Alberta, a body corporate carrying on business in the Province of Alberta;

(c) "date of possession" means the date of possession set forth on the Certificate of Possession and Warranty;

(d) "defects in workmanship or materials" means any construction carried out by the Builder below the building standards prescribed by the Alberta Building Code or the standards of the authority having jurisdiction in force at the time of construction;

(e) "major structural defects" means defects in workmanship or materials which are likely to result in failure of the load bearing portion of the home to provide support as an integral part of the home. It is strictly a condition that, excluded as major structural defects, are defects in driveways, basement floors, garage floors, patios, sidewalks, retaining walls and all concrete constructions which are not load bearing;

(f) "load bearing portion" shall, so as not to restrict the generality of the foregoing, mean footings, piles, foundation walls, grade beams, cripples or columns, beams of timber or steel, load bearing walls, floor joists, and roof trusses provided the foregoing support an integral part of the home;

(g) "home" means the new residential unit described in this Warranty excluding condominium units and common property;

(h) "purchaser" means the party named on the Certificate of Possession and Warranty as purchaser and any subsequent purchaser who may become a legal or equitable owner of the home during the term of this Warranty.

BUILDER WARRANTY

2. The Builder warrants that the home was constructed in accordance with construction standards prevailing in the Province of Alberta at the time of construction and without defects in workmanship or materials and in compliance with the covenants contained in an agreement between the Builder and the Program.

3. The Builder agrees to repair defects in workmanship or materials in the home and to repair or replace defective materials and appliances supplied by the Builder where defects become apparent within one (1) year from the date of possession.

4. The Builder shall, to the extent permitted by the manufacturers or suppliers, assign to the purchaser the benefit of any guarantee or warranty provided by any manufacturer or supplier for a period in excess of one (1) year from the date of possession.

5 The following items shall not be considered defects in workmanship or materials:

(a) defects in materials, appliances, design and workmanship supplied by the purchaser;

(b) defects arising from soil subsidence if the home is constructed on land owned by the purchaser should the purchaser not grant the Builder permission to conduct soil tests;

(c) defects arising from improper maintenance by the purchaser including damage caused by or resulting from dampness or condensation due to failure of the purchaser to maintain adequate ventilation in the home;

(d) defects in workmanship or materials in alterations by the purchaser and defects in workmanship or materials supplied by the Builder arising from such alterations made by the purchaser;

(e) surface defects of workmanship or materials apparent and accepted by the purchaser at the date of possession;

(f) normal cracks in plaster, paint, masonry, stucco and concrete;

(g) normal shrinkage or warpage of materials;

(h) normal soil subsidence of the land along utility lines.

PURCHASER OBLIGATIONS

6. (a) The purchaser shall immediately advise the Builder in writing of any defect in workmanship or materials which the Builder has failed to rectify under the Builder's Warranty. If the Builder then fails to rectify the defect in workmanship or materials, the purchaser shall immediately advise the Program in writing providing full details of the situation.

(b) The purchaser shall immediately advise the Program in writing of any major structural defect. The purchaser may be required to pay a fee to initiate an inspection by the Program to determine the validity of the claim. The amount of the fee and the conditions governing it are to be determined from time to time by the Program.

(c) If the purchaser has any dispute with the Builder concerning the performance of the warranty obligations of the Builder, the purchaser shall, before utilizing any other remedy available to him, proceed to conciliation in accordance with the conciliation procedure in this Warranty.

(d) In the event the home subject to this Warranty is resold by the original purchaser during the term of this Warranty:

(i) all of the foregoing obligations shall be binding upon any subsequent purchaser and in particular, any previous acts, omissions, defaults or agreements of any kind made by the original purchaser with the Builder or Program shall be binding upon any subsequent purchaser.

(ii) any subsequent purchaser shall inquire of the Program to determine the balance of current coverage remaining on the home, if any.

CONCILIATION PROCEDURE

7. If any dispute arises between the Builder and the Purchaser on any question regarding the performance by the Builder of the Builder's one year warranty which cannot be settled between the Builder and the Purchaser, the dispute shall be submitted to the Program for conciliation within sixty (60) days of the end of the Builder's one year warranty. The conciliation procedure shall be deemed to be mandatory upon the Builder and the Purchaser as a condition of the Program's accepting any responsibility whatsoever to carry out any remedial work or repairs as set forth in Clause 13(a).

8. Either the Builder or the purchaser may submit the dispute to the Program with a conciliation application fee in an amount to be set from time to time by the Program.

9. The Program shall provide a conciliator who shall make such inspections of the home as he considers necessary and who shall receive representations in a form approved by the Program from both the Builder and purchaser within the time prescribed by the conciliator.

10. Within a reasonable time of commencement of the conciliation proceedings, the Program shall cause the conciliator to provide the purchaser and the Builder with a decision in writing setting forth the changes, if any, required to settle the dispute.

11. If the conciliator determines that remedial work is necessary, the conciliator shall continue to conduct inspections of the home he deems necessary until the work has been completed to the satisfaction of the conciliator.

12. The decision of the conciliator shall be final and binding on both parties unless varied, revoked, or altered by an order or judgement of a court of competent jurisdiction.

13. If the award of the conciliator is in favor of the party submitting the matter to conciliation or if the conciliator rules that the request for conciliation was justified in any event, the conciliation fee paid by such party shall be refunded by the Program. In all other cases the fee shall be retained by the Program.

14. If the award of the conciliator is made against the party submitting the dispute to conciliation, the said application fee shall be forfeited to the Program unless otherwise directed by a Court of Law.

STANDARD PROGRAM WARRANTY

15. (a) If a Builder fails to fulfill the terms of the Builder's warranty, the Program shall fulfill the terms of the Builder's warranty

(b) The Program shall repair to the limit of liability under this Warranty any major structural defects in the construction of the home which become manifest during the four (4) year period commencing on the first anniversary date of the date of possession until the end of the fifth year following the date of possession.

(c) Decisions of the Program regarding the correction of defects in workmanship or materials or major structural defects shall be final and binding unless varied, revoked, or altered by an order or judgement of a court of competent jurisdiction.

(d) In the event that a home is rendered uninhabitable by defects in workmanship or materials which the Builder or the Program are obligated to repair, the Program shall pay any necessary increase in living expenses incurred by the homeowner and if necessary, the moving expense of household furniture and personal effects. The limit of liability of the Program for increased moving and living expenses shall not exceed a maximum sum of THREE THOUSAND DOLLARS ($3,000.00) in the aggregate including a maximum of TWO HUNDRED DOLLARS ($200.00) per day for board and lodging for all claims against one home during the term of the Warranty.

EXTENDED MAJOR STRUCTURAL DEFECT WARRANTY (Optional)

16. In the event an enrollment fee for the extended major structural defect warranty has been paid to the Program then the Program's major structural defect liability outlined in Clause 15(b) is extended for an additional five years after the end of the fifth year following the date of possession and in all other respects the major structural defect warranty limitations and conditions contained in this Warranty shall apply.

LIMITATION OF WARRANTY

17. There are no warranties or guarantees given by the Builder or the Program pertaining to the home binding upon the Program except as contained in this Warranty.

18. In cases of defects in workmanship or materials becoming apparent during the Builder's warranty but not resulting in a loss, damage, or an adverse effect on the home, the Program shall be entitled to defer the correction of the defect(s) until a loss, damage, or adverse effect occurs provided the occurrence takes place within a reasonable period of time.

19. Major structural defects resulting from defects in workmanship or materials supplied by the purchaser, or from improper maintenance by the purchaser, or from alterations made by the purchaser are not included in the Program's Warranty.

20. No proceedings, claims or actions may be taken for the repair of defects, the replacement of materials or otherwise under this Warranty where any proceedings, claims or actions have been taken under any deposit receipt issued by the Builder on behalf of the Program respecting the home described herein.

21. The warranties contained in this Warranty cover defects in workmanship or materials in the home. Neither the Builder nor the Program shall have any liability other than to repair the defects in workmanship or materials or major structural defects and in particular, shall not in any way, directly or indirectly, be liable for the resultant physical injury or property damage to a person or persons, or to property other than the home covered by this Warranty.

22. The limit of liability of the Program under this Warranty shall be the sum of THIRTY THOUSAND DOLLARS ($30,000.00) and the Program shall not be obligated to expend more than THIRTY THOUSAND DOLLARS ($30,000.00) on the home pursuant to its Warranty excepting, however, the amount of increased expenses provided under Clause 15(d).

23. Any legal proceeding or action against the Program under the conditions and agreements of this Warranty must be instituted before the expiration of a period of one (1) year from the date of the Program determination of the validity of the claim.

24. If at the time of a loss caused by a defect covered by this Warranty there is any insurance or other coverage provided both before or after such loss by any third party, governmental authority or otherwise which would attach if this Warranty had not been in effect, the Program shall be liable only for the excess, if any to Program limits, of loss over the applicable limit of the other coverage so in effect.

TERMINATION OF WARRANTY

25. This Warranty shall terminate and become null and void without notice in any of the following events:

(a) Should the purchaser default in any of the requirements or terms of Clause 6 of this Warranty;

(b) Should the purchaser fail to keep the home in a clean and sanitary condition;

(c) Should the purchaser allow any use of the home other than as a permanent residence;

(d) Should the purchaser allow the removal of the home or any substantial portion thereof from the lands described in this Warranty;

(e) Should the purchaser take any other legal recourse or proceedings with respect to this Warranty without first proceeding to the conciliation or inspection procedure herein contained.

NEW HOME WARRANTY

JANUARY, 1986

SCHEDULE "B" — CONDOMINIUM PROPERTY WARRANTY

INTERPRETATION

1 In this Condominium Property Warranty:

(a) "Builder" means the Builder named in the Certificate of Completion and Possession;

(b) The "Program" means the New Home Warranty Program of Alberta, a body corporate carrying on business in the Province of Alberta;

(c) "date of possession" means:

(i) in respect of residential condominium units for all warranties excepting those relating to major structural defects the date set forth as the date of possession in the Certificate of Completion and Possession hereinafter referred to; and

(ii) in respect of condominium common property and warranties relating to major structural defects affecting residential condominium units the date of substantial completion as defined in the Condominium Property Act;

(d) "defects in workmanship or materials" means any construction carried out by the Builder below the building standards prescribed by the Alberta Building Code or the standards of the authority having jurisdiction in force at the time of construction;

(e) "major structural defects" means defects in workmanship or materials which are likely to result in failure of the load bearing portion of the home to provide support as an integral part of the home. It is strictly a condition that, excluded as major structural defects, are defects in driveways, basement floors, garage floors, patios, sidewalks, retaining walls and all concrete constructions which are not load bearing;

(f) "load bearing portion" shall, so as not to restrict the generality of the foregoing, mean footings, piles, foundation walls, grade beams, telepoles or columns, beams of timber or steel, load bearing walls, floor joists, and roof trusses provided the foregoing support an integral part of the condominium property;

(g) "condominium property" means property described in a condominium plan as defined in the Condominium Property Act (Chapter 62 of the Revised Statutes of Alberta 1970 with amendments up to an including May 16, 1978) including units and common property as therein defined, but excluding landscaping and fencing;

(h) "purchaser" means the party named on the Certificate of Completion and Possession as purchaser and any subsequent purchaser who may become a legal or equitable owner of the home during the term of this Condominium Property Warranty.

(i) "common property" means so much of the parcel as is not comprised in any unit shown in the condominium plan referenced in the Condominium Corporation's copy of the Condominium Property Warranty.

(j) "residential unit" ("home") means a residential unit as defined by the Condominium Property Act (Chapter 62 of the Revised Statutes of Alberta 1970 with amendments up to and including May 16, 1978).

(k) "Condominium Corporation" means the body incorporated by Section 16 of the Condominium Property Act (Chapter 62 of the Revised Statutes of Alberta 1970 with amendments up to and including May 16, 1978) which comprises the purchaser of the plan number referred to in the Condominium Corporation's copy of the Condominium Property Warranty.

BUILDER WARRANTY

2 The Builder warrants that the condominium property was constructed in accordance with construction standards prevailing in the Province of Alberta at the time of construction and without defects in workmanship or materials and in compliance with the covenants contained in an agreement between the Builder and the Program.

3 The Builder agrees to repair defects in workmanship or materials in the condominium property and to repair or replace defective materials and appliances supplied by the Builder where defects become apparent within one (1) year from the date of possession.

4 The Builder shall, to the extent permitted by the manufacturers or suppliers, assign to the Condominium Corporation the benefit of any guarantee or warranty provided by any manufacturer or supplier for a period in excess of one (1) year from the date of possession.

5 The following items shall not be considered defects in workmanship or materials

(a) defects in materials, appliances, design and workmanship supplied by the purchaser,

(b) defects arising from improper maintenance by a purchaser or the Condominium Corporation including damage caused by or resulting from dampness or condensation due to failure of a purchaser or the Condominium Corporation to maintain adequate ventilation in the condominium property;

(c) defects in workmanship or materials or alterations by a purchaser or the Condominium Corporation and defects in workmanship or materials supplied by the Builder arising from such alteration made by a purchaser or the Condominium Corporation;

(d) surface defects in workmanship or materials apparent and accepted by a purchaser or the Condominium Corporation at the date of possession;

(e) normal cracks in plaster, paint, masonry, stucco and concrete;

(f) normal shrinkage or warpage of materials;

(g) normal soil subsidence of the land along valley lines.

PURCHASER OR CONDOMINIUM CORPORATION OBLIGATIONS

6. (a) The purchaser or Condominium Corporation shall immediately advise the Builder in writing of any defect in workmanship or materials which the Builder has failed to rectify under the Builder's Warranty. If the Builder then fails to rectify the defect in workmanship or materials, the purchaser shall immediately advise the Program in writing providing full details of the situation.

(b) The purchaser or the Condominium Corporation shall immediately advise the Program in writing of any major structural defect. The purchaser or the Condominium Corporation may be required to pay a fee to initiate an inspection by the Program to determine the validity of the claim. The amount of the fee and the conditions governing it are to be determined from time to time by the Program.

(c) If the purchaser or the Condominium Corporation has any dispute with the Builder concerning the performance of the warranty obligations of the Builder, the purchaser or the Condominium Corporation shall, before utilizing any other remedy available to him, proceed to conciliation in accordance with the conciliation procedure in this Condominium Property Warranty.

(d) In the event the home subject to this Condominium Property Warranty is resold by the original purchaser during the term of this Condominium Property Warranty:

(i) all of the foregoing obligations shall be binding upon any subsequent purchaser and in particular, any previous acts, omissions, defaults or agreements of any kind made by the original purchaser with the Builder or Program shall be binding upon any subsequent purchaser.

(ii) any subsequent purchaser shall inquire of the Program to determine the balance of current coverage remaining on the home, if any.

CONCILIATION PROCEDURE

7. If any dispute arises between the Builder and the Purchaser or the Condominium Corporation on any question regarding the performance by the Builder of the Builder's one year warranty hereunder which dispute cannot be settled between the Builder and the Purchaser or Condominium Corporation, such dispute shall be submitted to the Program for conciliation within sixty (60) days of the end of the Builder's one year warranty. This conciliation procedure shall be deemed to be mandatory upon the Builder and the purchaser or the Condominium Corporation as a condition of the Program's accepting any responsibility whatsoever to carry out any remedial work or repairs as set forth in Clause 15(a).

8. Either the Builder, the purchaser or the Condominium Corporation may submit the dispute to the Program with a conciliation application fee in an amount to be set from time to time by the Program.

9. The Program shall provide a conciliator who shall make such inspections of the condominium property as he considers necessary and who shall receive representations in a form approved by the Program from both the Builder and the purchaser or the Condominium Corporation within the time prescribed by the conciliator.

10 Within a reasonable time of commencement of the conciliation proceedings, the Program shall cause the conciliator to provide the Builder and the purchaser or the Condominium Corporation with a decision in writing setting forth the changes, if any, required to settle the dispute.

11. If the conciliator determines that remedial work is necessary, the conciliator shall continue to conduct inspections of the condominium property he deems necessary until the work has been completed to the satisfaction of the conciliator.

12. The decision of the conciliator shall be final and binding on both parties unless varied, revoked, or altered by an order or judgement of a court of competent jurisdiction.

13. If the award of the conciliator is in favor of the party submitting the dispute to conciliation, or if the conciliator rules that the request for conciliation was justified in any event, the conciliation fee paid by such party shall be refunded by the Program. In all other cases the fee shall be retained by the Program.

14 If the award of the conciliator is made against the party submitting the dispute to conciliation, the said application fee shall be forfeited to the Program unless otherwise directed by a Court of Law.

STANDARD PROGRAM WARRANTY

15. (a) If a Builder fails to fulfill the terms of the Builder's warranty, the Program shall fulfill the terms of the Builder's warranty.

(b) The Program shall repair to the limit of liability under this Condominium Property Warranty any major structural defects in the construction of the condominium property which become manifest during the four (4) year period commencing on the first anniversary date of the date of possession until the end of the fifth year following the date of possession.

(c) Decisions of the Program regarding the correction of defects in workmanship or materials or major structural defects shall be final and binding unless varied, revoked, or altered by an order or judgement of a court of competent jurisdiction.

(d) In the event that a home is rendered uninhabitable by defects in workmanship or materials which the Builder or the Program are obligated to repair, the Program shall pay any necessary increase in living expenses incurred by the homeowner and if necessary, the moving expense of household furniture and personal effects. The limit of liability of the Program for increased moving and living expenses shall not exceed a maximum sum of THREE THOUSAND DOLLARS ($3,000.00) in the aggregate including a maximum of TWO HUNDRED DOLLARS ($200.00) per day for board and lodging for all claims against one home during the term of the Warranty.

LIMITATION OF WARRANTY

16. There are no warranties or guarantees given by the Builder or the Program pertaining to the condominium property binding upon the Program except as contained in this Condominium Property Warranty.

17. In cases of defects in workmanship or materials becoming apparent during the Builder's warranty but not resulting in a loss, damage, or an adverse effect on the condominium property, the Program shall be entitled to defer the correction of the defect(s) until a loss, damage, or adverse effect occurs provided the occurrence takes place within a reasonable period of time.

18. Major structural defects resulting from defects in workmanship or materials supplied by the purchaser or the Condominium Corporation, or from alterations made by the purchaser or the Condominium Corporation are not covered under the Condominium Property Warranty.

19. No proceedings, claims or actions may be taken for the repair of defects, the replacement of materials or otherwise under the Condominium Property Warranty in respect of the condominium property where any proceedings, claims or actions have been taken under any Pre-Completion Receipt issued by the Builder on behalf of the Program respecting the condominium property described herein.

20 The warranties contained in this Condominium Property Warranty cover defects in workmanship or materials in the condominium property. Neither the Builder nor the Program shall have any liability other than to repair the defects in workmanship or materials or major structural defects and in particular, shall not in any way, directly or indirectly, be liable for the resultant physical injury or property damage to a person or persons, or to property other than the condominium property covered by this Condominium Property Warranty.

21. The limit of liability of the Program under this Condominium Property Warranty shall be the aggregate sum of TWO MILLION FIVE HUNDRED THOUSAND DOLLARS ($2,500,000.00) provided always that the limit of liability of the Program for each residential unit for any claim demand, cause of action or action of any kind whatsoever less than TWO MILLION FIVE HUNDRED THOUSAND DOLLARS ($2,500,000.00) shall not exceed the sum of THIRTY THOUSAND DOLLARS ($30,000.00) per unit pursuant to the Condominium Property Warranty excepting, however, the amounts of increased expenses provided under Clause 15(d).

22. Any legal proceeding or action against the Program under the conditions and agreements of the Condominium Property Warranty must be instituted before the expiration of a period on one (1) year from the date loss occurs.

23. If at the time of a loss caused by a defect covered by this Condominium Property Warranty there is any insurance or other coverage provided both before or after such loss by any third party, governmental authority or otherwise which would attach if this Condominium Property Warranty had not been in effect, the Program will be liable only for the excess, to Program limits, of loss over the applicable limit of the other coverage so in effect.

TERMINATION OF WARRANTY

24 This Condominium Program Warranty shall terminate and become null and void without notice only as to the residential units or portion of the condominium property affected in the following events:

(a) Should the purchaser or the Condominium Corporation default in any of the requirements or terms of Clause 6 of this Condominium Property Warranty;

(b) Should the purchaser or the Condominium Corporation fail to keep the condominium property in a clean and sanitary condition;

(c) Should the Condominium Corporation allow the use of the common property for rental purposes, provided however, this provision shall not invalidate or terminate any warranty for major structural defects to the extent that the remaining common property is used for residential purposes;

(d) Should the purchaser or the Condominium Corporation allow the removal of the condominium property or any substantial portion thereof from the lands described in this Condominium Property Warranty;

(e) Should the purchaser or the Condominium Corporation take any other legal recourse or proceedings with respect to this Condominium Property Warranty without first proceeding to the conciliation or inspection procedure herein contained.

NEW HOME WARRANTY

JANUARY, 1986

SCHEDULE "C" — PRE-COMPLETION RECEIPT

NEW HOME WARRANTY PROGRAM OF ALBERTA

PRE-COMPLETION RECEIPT NO _____

PRE-COMPLETION RECEIPT BETWEEN:

BUILDER _____ R# _____

AND

PURCHASER _____ PHONE NO. _____

FOR THE PURCHASE OF: _____ H# _____

_____ _____ _____ C# _____

PRE-COMPLETION RECEIPT AMOUNT		$
DEPOSIT MONIES PAID PREVIOUSLY AS EVIDENCED ON PRE-COMPLETION RECEIPT	$	$
TOTAL PRE-COMPLETION MONIES PAID TO DATE		$ PROGRAM COVERAGE LIMITED TO MAXIMUM OF $5,000.00
TOTAL PURCHASE PRICE		$

EXPECTED DATE OF TITLE TRANSFER _____ 19___ EXPECTED DATE OF SUBSTANTIAL COMPLETION OF PROJECT _____ 19___

COVERAGE OF THIS RECEIPT IS LIMITED TO THE PROVISIONS ON REVERSE OF THE PURCHASER'S COPY. CONFIRMATION OF THIS COVERAGE WILL BE ISSUED BY THE PROGRAM WHEN THE ORIGINAL COPY OF THIS RECEIPT IS RECEIVED BY THE PROGRAM FROM THE PURCHASER. A SEPARATE RECEIPT IS ISSUED FOR EACH PRE-COMPLETION PAYMENT.

BUILDER AUTHORIZED SIGNATURE _____ PURCHASER'S SIGNATURE _____ DATE _____ 19

MAILING ADDRESS OF PURCHASER _____ CITY _____ POSTAL CODE _____

WHITE — PROGRAM COPY (To be mailed or delivered by Purchaser to 210, 208 - 57 Avenue S.W., Calgary T2H 2K8 or 209, 10546 - 114 Street, Edmonton T5H 3J7)
PINK — BUILDER COPY CANARY — PURCHASER COPY

SAMPLE

NEW CONDOMINIUM PRE-COMPLETION RECEIPT

In this Pre-Completion Receipt "monies" means all the money paid by a Purchaser under a Purchase Agreement, other than rents, security deposits, mortgage advances, work or materials provided, payments for use and occupation, and adjustments which are subject to a setoff in favour of the Builder.

WHEREAS the Builder named on the Pre-Completion Receipt has entered into a written contract with the New Home Warranty Program of Alberta, a body corporate carrying on business in the Province of Alberta (hereinafter called "the Program"), the terms and conditions of which written contract govern this New Condominium Home Pre-Completion Receipt.

AND WHEREAS under the said written contract, the Program has agreed to carry out some obligations of the Builder in the event of the Builder's bankruptcy, insolvency or fraud;

AND WHEREAS under the said written contract, the Builder and the Program have agreed to provide to the property described herein a New Condominium Property Warranty on the terms and conditions therein contained;

NOW THEREFORE the Program hereby acknowledges and agrees:

i) that in the event monies paid by the Purchaser to the Builder named herein should become refundable to the Purchaser for any reason whatsoever and in the event such monies cannot be recovered by the Purchaser from the Builder due to the bankruptcy, insolvency of fraud of the Builder, the Program shall repay the same to the Purchaser;

ii) that if the improvements to the residential unit and the common property are substantially completed the protection offered to the Purchaser by the Program under this Pre-Completion Receipt shall cease upon delivery of the title document to the Purchaser;

iii) that if the improvements to the residential unit are substantially completed but the improvements to the common property are not substantially completed, the protection offered to the Purchaser by the Program under this Pre-Completion Receipt shall reduce by one half (1/2) upon delivery of the title document to the Purchaser, and upon the improvements to the common property being substantially completed the balance of the protection shall cease; subject always to the following conditions:

1. The Purchaser shall perform all of his obligations or shall be ready, willing and able to complete all of his obligations to the Builder pursuant to any contract between them.
2. The Purchaser shall, in the event of payment of any monies by the Program to such Purchaser, forthwith assign and transfer to the Program to the extent of such payment and security position, judgement, agreement for sale or equity security the Purchaser may hold against the Builder relating to the same transaction;
3. The Program copy of this Pre-Completion Receipt must be registered with the Program by the Purchaser promptly following the execution of this Receipt and Pre-Completion coverage will become effective only when confirmation of coverage has been issued by the Program;
4. New Condominium Property Warranties in the case of residential condominiums are subject to the following special conditions precedent:
   (a) In the case of residential units which are occupied, warranties shall commence on the date of possession of individual units, provided always that warranties shall not take effect, unless or until the occupant can legally obtain title to the said residential unit;
   (b) In the case of condominium property, warranties shall commence and take effect only after substantial completion of such common property as defined in the Condominium Property Act of Alberta.
5. Any legal proceeding or action against the Program under the conditions and agreements of this Pre-Completion Receipt must be instituted before the expiration of a period of one (1) year from the date upon which the bankruptcy, insolvency or fraud of the Builder has occurred;
6. The limit of liability of the Program for refund of money to any Purchaser shall be the sum of FIVE THOUSAND . . . 00/100 ($5,000.00) DOLLARS or such other sum as the Program may approve in writing from time to time, and in the case of warranties, such limitations as set forth in any Warranty Certificate of the Program shall apply.
7. This Receipt only applies to new condominium units.

EFFECTIVE DECEMBER 1/1985

SCHEDULE "D" — DEPOSIT RECEIPT

NEW HOME WARRANTY PROGRAM OF ALBERTA

DEPOSIT RECEIPT NO _____

DEPOSIT RECEIPT BETWEEN:

BUILDER _____ R# _____

AND

PURCHASER _____ PHONE NO. _____

FOR THE PURCHASE OF A NEW HOME LOCATED AT: _____ H# _____

_____ _____ _____ _____

DEPOSIT RECEIPT AMOUNT $ _____

DEPOSIT MONIES PAID PREVIOUSLY AS EVIDENCED ON RECEIPT # $ _____

TOTAL DEPOSIT MONIES PAID TO DATE $ _____ PROGRAM COVERAGE LIMITED TO MAXIMUM OF $5,000.00

TOTAL PURCHASE PRICE $ _____

TO BE CONSTRUCTED ON LAND OWNED BY: BUILDER ☐ PURCHASER ☐

EXPECTED DATE OF POSSESSION _____ 19___

COVERAGE OF THIS RECEIPT IS LIMITED TO A MAXIMUM OF $5,000 PAID AS A DEPOSIT AS DEFINED AND SUBJECT TO THE PROVISIONS ON THE REVERSE SIDE HEREOF. CONFIRMATION OF THIS COVERAGE WILL BE ISSUED BY THE PROGRAM WHEN THE ORIGINAL COPY OF THIS RECEIPT IS RECEIVED BY THE PROGRAM FROM THE PURCHASER. A SEPARATE RECEIPT MUST BE ISSUED FOR EACH DEPOSIT PAYMENT.

BUILDER AUTHORIZED SIGNATURE _____ PURCHASER'S SIGNATURE _____ DATE _____ 19

MAILING ADDRESS OF PURCHASER _____ CITY _____ POSTAL CODE _____

WHITE — PROGRAM COPY (To be mailed or delivered by Purchaser to 210, 208 - 57 Avenue S.W., Calgary T2H 2K8 or 209, 10546 - 114 Street Edmonton T5H 3J7)
PINK — BUILDER COPY
CANARY — PURCHASER COPY

SAMPLE

NEW HOME DEPOSIT RECEIPT

IN THIS Deposit Receipt a " deposit" means money paid to a maximum of $5,000 to bind a contract, confirmed by the Program in writing. The contract shall be deemed to become binding when all conditions are satisfied and may consist of more than one deposit payment. Without limiting the generality of the foregoing the term "deposit" shall be deemed not to include considerations such as: work or materials provided; progress payments; rentals or payment for use and occupation; payments made which are subject to a setoff in favour of the builder to the extent of the amount of the setoff.

WHEREAS the Builder named on this Deposit Receipt has entered into a written contract with the New Home Warranty Program of Alberta, a body corporate carrying on business in the Province of Alberta (hereinafter called "the Program"), the terms and conditions of which written contract govern and apply to this New Home Deposit Receipt;

AND WHEREAS under the said written contract, the Program has agreed to carry out some obligations of the Builder in the event of the Builder's bankruptcy, insolvency or fraud;

NOW THEREFORE the Program hereby acknowledges and agrees that in the event the deposit paid by the purchaser to the Builder named on the face hereof should become refundable to the Purchaser and is not otherwise excluded above and in the event such deposit monies cannot be recovered by Purchaser from the Builder due to bankruptcy, insolvency or fraud of the Builder, the Program shall repay the same to the Purchaser, subject always to the following conditions:

1. The Purchaser shall perform all of his obligations or shall be ready, willing and able to complete all of his obligations to the Builder pursuant to any contract between them; and
2. The Purchaser shall in the event of payment of any deposit monies by the Program to such Purchaser, forthwith assign and transfer to the Program to the extent of such payment any security position, judgement, agreement for sale or equity security the Purchaser may hold against the Builder relating to the same transaction; and
3. The Program copy of this Deposit Receipt must be registered with the Program by the Purchaser promptly following the execution of this receipt, and confirmation of coverage will be issued by the Program.
4. The following limitations shall apply:
   (a) The protection offered by the Program against loss of a deposit shall end at the commencement of any warranty provided by the Program on the same residential unit and for purposes of clarity possession of a unit under any circumstances; including all forms of tenancies, is deemed to be the date of commencement of Program warranty coverage.
   (b) Any legal proceeding or action against the Program under the conditions and agreements of this Deposit Receipt must be instituted before the expiration of a period of one (1) year from the date upon which the bankruptcy, insolvency or fraud of the Builder has occurred;
   (c) In circumstances where deposits are given to builders where homes are being built on land owned by the purchaser, deposit coverage shall cease when value, to the amount of the deposit, has been installed on these said lands to the benefit of the purchaser.
5. The limit liability of the Program for refund of a deposit to any Purchaser shall be the sum of FIVE THOUSAND . . . 00/100 ($5,000.00) DOLLARS and in the case of warranties, such limitations as set forth in any Warranty Certificate of the Program shall apply.
6. This Receipt does not apply to condominium residences.
7. The information provided on this receipt must correspond exactly with the Offer to Purchase.

EFFECTIVE DECEMBER 1/85

APPENDIX G

BUILDER SURVEY

APPENDIX G

BUILDER SURVEY

1. How many years have you been a member of New Home Waranty? _____

2. How many homes did you build last year? _____

3. How many homes did you expect to build and sell this year? _____

4. Do you feel that it would be a positive step to offer potential new home buyers an optional five year extension to our existing warranty?

   YES _____

   NO _____

5. Our risk analysis shows that we require a $150 fee to offer this coverage to homeowners whose warranties are expiring. If this coverage is offered at point of sale, our analysis shows we require a minimum of $100.

   If this additional protection was offered, would you:

   a) offer this as part of your marketing package? YES _____

   NO _____

   OR

   b) offer this to the purchaser as an option at point of sale? YES _____

   NO _____

6. Comments: _____

SUPPLEMENTARY QUESTIONNAIRE - OPTIONAL

1. Are you experiencing any difficulty in the following areas:

	YES	NO
a) Availability of Serviced Lots	_____	_____
b) Availability of Interim Financing	_____	_____
c) Availability of Mortgage Insurance	_____	_____
d) Availability of Mortgage Loans	_____	_____
e) Do you feel the Program's present deposit coverage is adequate?	_____	_____

2. Are there any areas of service you feel your Warranty Program should be investigating?

_____

_____

_____

_____

_____ _____

Name of Company Signature

May 15, 1985

APPENDIX H

CONSUMER SURVEY

APPENDIX H

NEW HOME WARRANTY PROGRAM OF ALBERTA - HOMEOWNER QUESTIONNAIRE February 1985

1. a) Are you the owner of this home? Yes____ No____

   b) If yes, are you the original or subsequent owner? _____

2. Are you aware that this home was built under the New Home Warranty Program's five year warranty? Yes____ No____

3. Have you ever used the services provided by the New Home Warranty Program of Alberta? Yes____ No____

   If yes, please explain _____

   _____

4. Were you satisfied with these results? Yes____ No____

   If no, please explain _____

   _____

5. Are you aware that your five year warranty is due to expire during the current year? Yes____ No____

6. If $30,000 of major structural warranty coverage was made available to you for an additional five years, would you be interested in such coverage? Yes____ No____

7. Would you be prepared to purchase such coverage? Yes____ No____

8. Which of the following payment schedules, with deductible would you prefer? Please rate your preferences, 1, 2, 3, 4 or 5. (1 - first choice, 5 - last choice)

   a) 5 years $150 $ 0 deductible _____

   b) 5 years $125 $ 250 deductible _____

   c) 5 years $100 $ 500 deductible _____

   d) 5 years $ 75 $1,000 deductible _____

   e) 5 years $25/year $1,000 deductible _____
   (Annual payments)

9. If during the next five years you decide to sell your home, do you feel the warranty coverage would make your home more marketable? Yes____ No____

10. Do you feel such coverage would add value to your home? Yes____ No____

11. Are there any services you would recommend that the New Home Warranty Program implement for the protection of new home buyers in Alberta? Yes____ No____

    _____

    _____

Bulletin Summary

Sub-Trade & Supplier Liaison Committee

A Service of the Following Committees:

Grande Prairie	Edmonton	Calgary
Red Deer	Medicine Hat	Lethbridge

DEDICATION

This Sub-Trade & Supplier Liaison Committee "Bulletin Summary" is dedicated to the memory of the late Dave Bell, of Edmonton.

Dave's dedication to the Housing Industry and his untiring efforts led to Sub-Trade and Supplier Committees being formed throughout Alberta and interest aroused throughout Canada.

There have been literally hundreds of people involved in various meetings throughout Alberta in producing these bulletins. Space does not permit the listing of these individuals and firms, however, their time and efforts are gratefully acknowledged.

FORWARD

This Sub-Trade & Supplier Committee "Bulletin Summary" is presented as produced by the various Sub-Trade & Supplier Committees. Each respective category has been produced by Sub-Trades and Suppliers directly involved in that industry, hence the different approach to individual areas.

The information contained is a result of efforts of Sub-Trade & Supplier Committees in Edmonton, Calgary, Grande Prairie, Red Deer, Lethbridge and Medicine Hat.

A Soil Testing report is included in this manual. This report has been prepared by the Warranty Program's Technical Advisory Committee.

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SOIL TESTING
FOR ALBERTA HOUSEBUILDERS

1. THE PROBLEM

Many problems with the houses, which we as builders complete and sell, can be traced back to one of the first stages in construction - the soil upon which the house rests.

Specifically, we are referring to cracked concrete walls, cracks in the plasterboard, wet basements, cracked driveways, disintegrating concrete and backfill settlement, being just a partial list of soil-related woes.

Let's look at these problems in the usual sequence they might be encountered by a house builder to see, firstly, what the rational cause of each of the soil problems in turn might be and secondly, what should you as a house builder be on the alert for.

2. WHAT TO LOOK FOR

The first step in building a house is getting a lot on which to build it and this lot is often obtained from one of the land developers who in most cases already have some soil test results. If not, you as a builder, could consider having some simple soil tests done yourself. The items you are looking for from the developers or your own soil tests are:

1. Soil type (silt, clay, sand, shale, gravel, organic, fill, etc.)
2. Groundwater level
3. Soil Alkali
4. Surrounding stage of development

The first three items are usually presented in the form of soil test hole logs while the last is obtained from personal observation or knowledge of the general area in which the subdivision is to be located.

1. Soil Type

Things to watch for, under Point 1, is that the soil type determines the allowable bearing value that a particular soil can safely carry. This in turn affects footing size, wall reinforcing and other items. For example, natural undisturbed pit run gravel at footing level is the best material upon which to build since it provides relatively high bearing values.

An uncompacted fill, on the other hand, is unsuitable because of later settlement. Organic material such as loam and soil containing rootlets, humus, etc., also often has the undesirable property of excessive consolidation under sustained load, as from a house, with resultant later settlement. The Alberta Building Code 9.12.1.1. requires removal of loam and other organic

soils for that reason while fill material should either be certified as 'satisfactory as is' by an engineer or be recompacted to a satisfactory extent or removed and replaced with properly compacted suitable material.

Silts are the smaller soil sizes while clays are the very finest size. Like all soils their properties, including bearing values, are affected by their moisture content, becoming progressively weaker the higher the water content. Weeping tile connected to a suitable outlet, usually a storm sewer, is necessary with these soils unless it can be proven to be unnecessary. Some clays expand in the presence of moisture, exerting tremendous upward pressures in the process. Expansive clays should be watched for and can be identified by experienced soils engineers. Generally, though, silts and clays are satisfactory for a founding soil. Builders should be aware, though, that silts and clays in the presence of water and freezing temperatures are subject to frost action - frost heave. We'll discuss this again under the heading of groundwater. Perhaps we should note that some shales are still expanding as a result of the release of pressure caused by the disappearance of the weight of the enormous ice thickness -up to a mile thick it is estimated - when the last Ice Age ended. These are termed over-consolidated shales and they too exert high upward pressures over a long period.

Sand at footing level, if very dry, may require moistening and tamping between the footing forms by means of vibratory types of pneumatic equipment prior to placing the footing concrete. These 'jumping jacks' are readily available at most equipment rental outlets.

Generally, a house builder should be aware of potential foundation problems if the excavation shows that footings will be placed on more than one soil type. This often occurs as a result of sloping layers or stratum of soils, more than one of which may be intersected by the horizontal footing level. Since each different soil type has different bearing and consolidation properties, differential settlement of the house may occur with all the associated cracking of walls, sticking doors, etc.

2. Groundwater

Point 2 has been listed as groundwater level. This has significance to builders for a number of reasons such as wet basements, house settlement and cracking problems. Groundwater, first of all, generally follows the surface topography. It is seasonal in that the water level rises and falls in a regular pattern throughout the year, generally being highest in early summer. This factor must therefore be taken into account when noting the groundwater level from a test hole - that is realizing it is not at a fixed level and might cause trouble later if weeping tile and other protective measures

are not installed. Groundwater measurements are also affected by soil type inasmuch as it will quickly move to its true level through a loose gravel, for example, whereas in a clay, it will take a considerable longer time to stabilize in a test hole. Silts and clays also can draw free water up through capillary action from a deeper source of free water. Such soils are in the grain size referred to as frost-susceptible and problems associated with frost heaving should therefore be considered when fine soils are encountered. This means that if a soil test hole shows a high groundwater level and a frost-susceptible soil (silts or clays) then protection against frost heave may be necessary. For example, a house built on these soils in the summer and then occupied the first winter with a heated basement, would not move upward (heave) because heat penetration through the basement walls and floor prevents freezing of the founding soil. If at the same time the house includes an unheated or only partially heated attached garage, then the garage would heave during the winter and cracking of walls will occur due to the relative upward movement of the garage relative to the house. Solutions are available to this problem.

Keep in mind that frost heave of soil will occur whenever all three of the following occur simultaneously:

— soil grain size is in the frost-susceptible range
— freezing of the soil adjacent to the structure occurs
— sufficient moisture is present.

To prevent frost heave only one of the foregoing must be altered.

3. Soil Alkali

Many parts of the prairies, including Alberta, have soils carrying various alkalies including sulphates. In Alberta these are principally magnesium sulphates (Epson salt), sodium sulphates (Glaubers salt), and calcium sulphates (Gypsum). They result from the basic subterranean mineral dissolving in the presence of water. The groundwater and surface water as it moves - upward, downward and laterally - carries and distributes the salts in solution. Often they are carried to the ground surface by capillary action or directly by groundwater. At the surface the dissolving water evaporates and the remaining minerals become visible as a white crystal deposit on the ground surface.

Similarly the salts, if present in a soil enclosing a house basement, can easily be carried through the wall in solution in groundwater. As the water very slowly moves through the wall - driven by higher vapor pressures in the outside soil than on the inside of the house basement - the water will evaporate on reaching

the warmer air inside the basement leaving the salts deposited as a white powder on the inside face of the basement walls.

Not all white powder on concrete basement walls should be regarded as sulphates though, since carbonates and some other minerals are present in soils and also in portland cement itself and these, too, can be deposited by the same mechanism on the inside face of house basement walls.

However, the first two salts mentioned, magnesium and sodium sulphate, are harmful to concrete when present in the soil in relatively high concentrations. A special portland cement called sulphate resistant cement was developed in Western Canada more than fifty years ago to resist the destructive chemical action of these alkalies.

Therefore, if soil tests at your house lot shows sulphate contents greater than 0.20%, then sulphate resistant concrete should be specified at that site for all subgrade concrete.

4. Stage of Subdivision Development

When a house builder considers a soils log for a subdivision in which he is planning on building or when he orders soil tests himself, the stage of development surrounding the particular lot should be part of his thinking.

The reason is again related to groundwater and specifically the problems to a builder which an unanticipated later rise in groundwater level can cause.

Specifically, as a subdivision becomes developed the groundwater level under that subdivision will rise relative to its level prior to development. This is because of a number of reasons. Firstly, because ground level prior to development is usually covered with vegetation - natural prairie grass or weeds or some form of growing organic material. This vegetation, through the natural process of transpiration, draws up moisture from the ground through its root system. A large amount of water is drawn up in this manner depending on the amount of natural vegetation present. This has the effect, prior to development, of significantly lowering the groundwater level. After development the ground surface of a subdivision has the natural vegetation stripped away and usually a significant portion of the ground surface covered with concrete sidewalks and asphalt pavement. Thus the natural vegetation no longer draws up groundwater nor does natural precipitation get into the ground in those areas since surface runoff is collected by catch basins and manholes and drained away by storm sewers.

Similarly, the houses themselves prevent the natural evaporation of the ground water by wind and high temperatures from the soil beneath the houses.

Finally, on the remaining ground surface, lawns are planted and then are watered so that natural evaporation of the groundwater again does not occur. Leaking service pipes also add to a rise in groundwater level.

The net effect of all these factors which invariably occur in almost all of the usual residential subdivisions is that the natural level of groundwater is significantly affected. Invariably a significant rise in groundwater level under subdivisions occurs after development, relative to the groundwater level prior to development. Therefore, the stage of development at which groundwater levels have been determined should be kept in mind when interpreting the significance to you as a builder, of that data contained in a developer's soils log or in your own tests as a house builder. In other words, the use of weeping tile around the perimeter at footing level of the proposed house, properly connected to a storm sewer or other approved outlet, may be necessary to minimize a future wet basement - unless tests of groundwater levels are properly interpreted in light of the foregoing reasons for change in future groundwater levels.

3. SOIL BACKFILLING PROBLEMS

A very common soil problem encountered some months after completion of a house is settling of soil around the house perimeter. This in turn causes uneven settling and hence cracking of concrete sidewalks if placed on that backfill. At the same time the soil settlement causes a trough to form which tends to collect runoff water and direct it down around the outside walls of the basement. From there the water tends to seep inside the basement and if it seeps through faster than it can evaporate, then free water forms inside the basement with all the attendant complaints about wet basements.

To minimize these problems the soil as it is backfilled against the outside perimeter of a house basement should be placed in layers no more than one foot thick with each layer being compacted by a hand operated pneumatically powered tamper. If this backfilling material is very dry then some water may have to be added during the tamping operation to get even less future settlement. Naturally no backfilling or compaction should be undertaken until the fresh concrete comprising the basement walls has gained sufficient strength to withstand the pressures without cracking. In general, be careful in compaction against concrete walls as the backfill exerts high pressures causing cracking of walls regardless of freshness of concrete.

Even so, the use of downspout extensions should be encouraged to carry roof runoff as far away as practical from the exterior of the basement walls of the house.

Cracking of concrete driveways and patios built near the house are also often caused by soil backfilling problems - or rather by lack of reasonable compaction measures during backfilling.

Correct backfilling procedures may be economically controlled by means of first testing in the laboratory to determine the optimum moisture content and density that a particular soil to be used for backfill should have. Then as backfilling at the site proceeds, a device referred to as a densometer is used to check that these density and moisture values are achieved.

In any case much improvement is possible in the avoidance of later soil settlement problems simply by enforcing the backfilling procedures by layers with concurrent tamping as outlined above, even if no density testing is conducted.

Respectfully submitted

KLOHN LEONOFF LTD.

per DR. LLOYD E. RODWAY, P. Eng.
Member Technical Committee
New Home Certification Program of Alberta

SITEWORK

SITING

Survey companies have provided building stakeout services for many years. This service normally includes reference staking for the position of a building to be built with a subsequent survey to determine the location of a building as built.

In many instances the as-built location of a building is not in conformance with the referenced location during the initial survey.

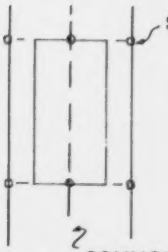
Frequently cribbing crews and forming crews employ the usage of two of four reference points only and square the building accordingly. In most cases the two rear reference points are used. Occasionally a builder changes the house type to the reference staking and a larger building is constructed on the lot. When the rear reference points are used, the rear of the building is held in its proper position. However, this means the front of the building must "float" causing a projection into the minimum front yard sometimes causing the necessity to demolish the basement or apply for a relaxation of a zoning by-law.

As a matter of standard procedure it is suggested that cribbing crews and forming crews proceed in the following manner:

1. Use the two front reference points and square the building accordingly.
2. Perform a check measurement to the two rear reference points to insure the building conforms with the referenced location.
3. If a problem appears to exist at this stage a check of the cribbing layout should be performed and if a problem does exist the survey company involved will correct the problem.

Common encroachments on semi-detached units situated on specific lots are becoming more apparent every year. As you are well aware building encroachments can be quite costly to the builder but easily avoided if a few simple steps are followed. It is recommended that when cribbing the basement the common wall or center line of the unit be established first off the survey reference points provided and that cribbing proceed from the center line established, and not the corners of the buildings.

It is recommended the surveyor establish the common property line.

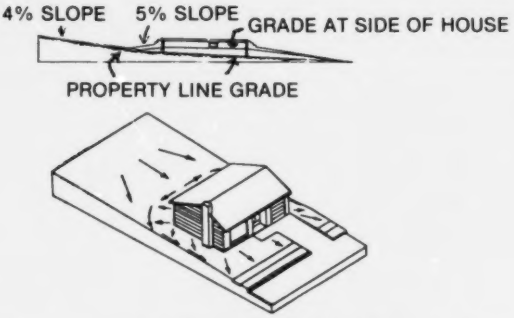


Establish center line of common wall first from survey reference point.

LOT GRADING

Drainage patterns on lots are almost exclusively rear to front. This type of drainage pattern requires some special consideration as to the house type used. It is recommended that a unit should have a high grade at the back becoming lower as it moves to the front, thus fitting into the slope of the lot. This recommendation would help to keep attached garage driveway slopes at a minimum. Some land developers request a grading certificate which states that the house and lot corners adhere to the developers lot grading plan. It is recommended that the rear lot corners be grade staked before final grading is done. After final grading - the rear lot corners can be quickly checked and the certificate

issued by your surveyor, alleviating numerous trips by a land surveyor and/or engineer.



Once the surveyor has been called and has done his stake-out several visual checks can ensure no errors have been made.

1. Compare the stake-out with plot plan
2. Visualize the walls in place in relation to:
   a) Street
   b) Neighbouring properties
   c) Lot itself
   d) Any unforeseen difficulties in establishing the outlined drainage patterns

If an error is suspected any changes in elevations should be thoroughly investigated.

GRADING AND RETAINING WALLS

City Planners advocate use of natural topography of land in development planning.

This which is appreciated by Developers and Architects but quite often builders forget their responsibilities when final grading of lots is undertaken.

Site grading must comply with the following articles taken from the Alberta Building Code.

9.14.6.1	The building shall be located or the building site graded so that water will not accumulate at or near the building.	Surface Drainage
9.14.6.2	Surface drainage shall be directed away from the location of a water supply well or septic tank disposal bed.	

9.14.6.3	Where runoff water from a driveway is likely to accumulate or enter a garage, a catch basin shall be installed to provide adequate drainage.	Interference with surface drainage
9.14.6.4	Where downspouts are provided and are not connected to a sewer, provisions shall be made to prevent soil erosion.	Downspouts

Developers could prevent many problems if when Planning new Sub-Divisions, specify where retaining walls would be required and make construction of them a requirement with lot purchase.

CONCRETE

FOOTING AND WALLS

To avoid delays place your order for concrete early. Provide the concrete supplier adequate information such as location of project, strength of concrete required, how fast it is to be placed and the method used to place it. Concrete should be received by a construction superintendent or someone in authority. Delivery tickets should be checked at the site for their accuracy. Remember to provide the supplier good access routes to the job site. Having a qualified concrete finisher or placer is of utmost importance. The supplier's main responsibility is the strength of the concrete, the rest is up to the finisher.

The traditional concrete foundation is a versatile and often forgiving foundation material. Care in handling and the observation of basic procedures will ensure a stable and attractive foundation.

1. Has any soil testing been done? Check for presence of soluable sulphates; bearing capacity of soil.
2. Make sure that garage location is undisturbed.
3. Ensure that no organic material is present. (Section 9.12.1.2 of the Alberta Building Code is explicit).
4. Check forms for trueness.
5. Make sure concrete is properly vibrated.
6. Supervise backfilling operation. Watch for possible damage to weeping tile and wall itself.
7. Consider the use of control joints.

DRIVEWAYS

A good base is essential. If concrete is to be placed over utility ditches, they must be soaked and well compacted.

Piles and grade beams with rebar should be used to bridge utility ditches. The slab itself should consist of 25 MPA air entrained concrete with rebar or #6 gauge wire mesh. Best results have been obtained by placing the rebar or mesh about 1" from the bottom of the concrete. Power trowling will result in a hard finish which will resist "freeze-thaw" cycles. No bleed water should be evident when surface is finally finished.

GARAGE PADS

The same concrete and installation procedures as those used on driveways should be used. Grade beams and piles (12" - 10" deep) may be used. Piles under the slabs should be at 8' centres. If pad is next to foundation, dowels on 18" centres should be used.

SIDEWALKS

Sidewalk heaving and cracking and brick archway failure are two problems that can usually be identified as either (A) "Pile Failure" or (B) "Frost Heave".

When placing piles the following points should be given consideration.

1. As a rule of thumb, piles should be placed at twice the frost penetration depth. e.g. 6' frost penetration, use 12' piles.
2. Friction quality of pile diminishes drastically as pile diameter decreases.
3. Place concrete as soon as possible after pile hole is dug. This will minimize (A) Water Accumulation, (B) Cave-in Potential (C) Garbage Collection.
4. Re-inforcing rods must extend full length of the pile.
5. An adjacent service line (water, sewer, etc.) will often diminish the effectiveness of a pile.

To minimize sidewalk failure (cracking, heaving, etc.) special attention must be given to design. The most common design used in Northern Alberta is an anchored type. i.e. Sidewalks anchored to piles and garage grade beam. If this method is used, two areas must be given consideration.

1. Sand or base material must be dry.
2. A void should be provided beneath the slab. e.g. Min. 2" of styrofoam or 4" stramit.

Keep in mind when using the anchored method of installation, if moisture is present or allowed to accumulate, frost heave will probably occur.

Your committee recommends for best results, the sidewalk slab should be free floating. There are three generally acceptable methods of obtaining a free floating slab.

1. Separate the slab from the overhang supporting column (brick post etc.) and the garage grade beam

with asphalt impregnated fibreboard. Allow the slab to rest (not anchored) on pile.

2. Where covered walkway is used adjacent to attached garages, grade beams and piles could be used with slab resting on top.
3. Wing wall with slab resting on top.

Of the three methods, your committee recommends the wing wall (while the most expensive) is probably the best. Whichever method you use to achieve a free floating slab keep two points in mind.

1. Provide a ledge or support for the slab to return to its original position.
2. Make provisions for the slabs to move upwards on the grade beam and parging. e.g. Asphalt impregnated fibreboard.

BASEMENT FLOOR SLABS

Before ordering concrete, ensure that the furnace is hung high enough to allow at least 1' clearance above the finished concrete. The concrete should not be placed if the area is less than 11 degrees C. Concrete must never be placed over a frozen surface. A minimum of 5" of fill should be used. The fill should be levelled to allow about 25 mm cover on all footings and pads to prevent the floor from bonding. (Building paper or poly may also be used.)

PRESERVED WOOD FOUNDATIONS

With the increased use of the preserved wood foundation system, it is imperative that any contractor contemplating the use of the system be thoroughly familiar with the techniques involved. There are several sources of reference available. The publication "Construction Guide For Preserved Wood Foundations" should be consulted. It is normally available through the supplier. Refer to the "Standata" published in October 1978 by Alberta Labour, Building Standards Branch.

On-site supervision is vital. The following are examples of areas which must receive close supervision:

1. Trueness and plumbness are critical.
2. Lumber cuts after treatment must be double brush coated with a certified preservative.
3. Back filling
   C.1 - See "Standata" October 1978 for material to be used.
   C.2 - Avoid damage to damproofing membrane.
   C.3 - Operate equipment at right angles to wall.
4. Design and supervision by an engineer is a must.

FRAMING

The areas listed are the most common infractions discovered in framing inspections as observed by C.M.H.C. and A.H.M.C. Inspectors. Attention to these areas may significantly reduce your framing infractions.

1. Fire stopping is not being provided in attic spaces and drop ceilings as required. Maximum dimension of space in attic is 20 m (60 ft.). Horizontal service space for plumbing and electrical is not required to be shafted.
2. Load bearing posts carrying beam and floor load not carried to suitable bearing.
3. Spacing of 38 x 89 (2 x 4) studs in load bearing partition supporting roof load plus two floors (300 mm maximum spacing).
4. Excessive floor joist and truss mutilation (pipe hole cutting, etc.) See A.B.C. 1981 9.23.5.
5. Roof Trusses
   a) Offset truss gusset plates.
   b) Defective truss struts and lower cords.
   c) Missing truss material grade stamps.
   d) Missing manufacturers I.D. stamps.
6. Overspanning is a common area of omission.
   — Header joists - 4' and over must be double, 10'8" and over must be designed.
   — Trimmer joists - 32" and over must be double, 6'8" and over must be designed.
7. Window flashing missing or inadequate. Must be a minimum of 2" return.
8. Floor cantilever insulation inadequate.
   a) Batts missing
   b) Pipes not insulated
   c) No heat flow in under floor, drop ceiling, pipe chases.
9. On multiple story units proper fire separation including blocking frequently overlooked. Offset upper bearing walls often have inadequate base support.

One of the major concerns expressed by the inspection agencies contacted was the non-compliance with approved plans.

Good supervision in this area will minimize costly delays and inspection call backs.

SUB-FLOORS AND FLOORING

SUB-FLOORS

Problem

Squeaky floors, nail popping and general telegraphing through to the surface of sheet vinyl flooring, any imperfection in the sub-floor.

Cause

Usually caused by an improper sub-floor installation. Resilient floors have a natural tendency to conform to the surfaces over which they are laid.

Recommendations

1. To avoid squeaks primary sub-floors should be temporarily tacked down until the house has been drywalled and ready for floor coverings. The sub-floor should then be securely nailed, stapled, or screwed.
2. Material that has been exposed to the weather can delaminate and weaken. This can result in lifting, blistering, cave-ins and open seams. Raised plywood graining will telegraph through most resilient floor coverings.
3. All glued down floor coverings require the best grade of secondary sub-floor underlayment nailed or stapled down over the primary sub-floor. This is especially important in kitchens, bathrooms or wherever a resilient floor covering is to be installed.

Recommended Types of Underlay (Secondary Sub-Floor)

1. ¼" good one side fir.
2. 3/8" K-3 board (check if approved by manufacturer of floor covering to be used).

Installation of Plywood

1. Stagger joints - reduces seam problems and compensates for sub-floor movements.
2. Panels should be touching - reduces filling requirements and telegraphing of joints.
3. Lay panels flush and level - will reduce sanding and filling and generally improve the finished appearance.
4. Use correct nails - should be ring-shank, spiral or galvanized types.
5. Nail 4" - 6" on centre (both directions).
6. Drive nail slightly below surface.
7. If staples are used they should be divergent barbed staples spaced every 2 inches along the edge, 3" in centre of sheet.

Proper care must be taken by all trades to keep sub-floor dry and clean. Insist that all paint, stains, varnish, plasters, sub-floor adhesives, etc. be removed or care taken to keep off. These contaminates are incompatible with the adhesive causing bonding problems and possible staining of vinyl flooring. Job foremen and supervisors must take the time to see that the sub-floors are nailed properly and kept in good condition.

Vinyl staining is recurring months after installation apparently caused by these contaminants.

Suggested Solutions

1. In all cases manufacturer's specifications for proper installation should be used for vinyl flooring.
2. Flooring, sub-flooring, and adhesives must be compatible with one another. Proper selection of floorings, adhesives and their use according to specified requirements is recommended.

To assist in the proper installation of all floor coverings heat must be on in the home and the heat should be constant and maintained. Other trades should be out of the home during installation. Care must be taken by the trades which follow. Change in C.M.H.C. minimum allowing use of thinner surface on vinyl. Products require extra care.

FLOORING

While consumer complaints on floor coverings usually relate to quality, the comments resulting from a recent Flooring Sub-committee meeting would indicate that one of the major problems encountered by floor layers is improperly handled panel-type underlay. Following are several suggestions relating to this material:

- Particleboard is a popular underlayment material but damages easily and must be handled carefully.
- Particleboard swells when wet so it is imperative that it be kept dry.
- Use of staples as a fastener is recommended (cross point coated). Ensure that the driving force is set to imbed the staples properly as particleboard does not sand as well as plywood.
- When using plywood "select fir" rather than "factory" grade is recommended.
- Check specification of any particleboard being used.
- Consider the use of a vapour barrier under particleboard.
- Underlayment should be used under resilient flooring.

Your flooring sub-committee reports that the most common problem that they encounter is the house not being ready. Ensure your homes are ready for floor coverings by:

1. Having sub-floor and underlay properly secured.

2. Having heat and power in the house.
3. Ensure that the house is clean.

Schedule to minimize damage by ensuring that:

1. Cabinets are in.
2. Concrete basement slab has been poured.
3. Protection is provided when staining or painting is being done.

Quarry Tile

Consumer complaints about quarry tile installed in surfaces other than concrete are numerous. Listed below are several tips that will minimize cracking of the tiles.

1. Consider the use of double floor joists and/or doubled sub-floor.
2. Consider the use of joists 12" O.C.
3. Flexible adhesive will aid in minimizing cracks.
4. Install quarry tile only on narrow and smaller surface areas.

PLUMBING

C.C. DAMAGE

This is frequently occurring and your sub-committee recommends care and close supervision during backfilling, grading, etc. to eliminate damage or if damage should occur to ensure that repairs are made promptly.

FROZEN WATER LINES

In times of heavy frost (5' - 7') and when a plumber is finished he often leaves the water running to keep underground lines from freezing. This is often turned off by the builder resulting in frozen water lines.

VACUUMS IN STACKS

During winter months city manhole covers are often not cleared of ice and snow causing sewers to freeze and the stacks acting as a chimney creating warm sewer gases to rise up the stack and melt the snow. This subsequently freezes, closes off the stack creating a vacuum. Stack freeze over can be eliminated to a certain degree by insulating the stack at least three feet down from the roof opening. Hot water should be used to thaw a frozen stack.

CAULKING

One of the most common complaints received by your Warranty Program is drafts around baseboards and electrical outlets. Your committee reports that inadequate

caulking or none at all between the bottom plate and sub-floor is often the cause.

PLUMBING

Basement sand must be available for plumbing rough-in as drainage pipes are required to be buried in sand for rough-in inspection.

Building plumbing services are required to extend 3 feet outside footing. Plumber should be contacted when footing forms are being constructed.

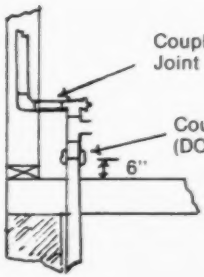
Plumbing rough-in should not be done when temperature is below – 10°C. The glue will not set up properly on A.B.S. or P.V.C. pipe.

Basements being insulated are causing a deeper frost penetration near foundation, therefore, exterior water service should be run as close to sanitary line as possible. This will minimize freezing.

Furnaces, when hung should be placed as near as possible to final location to minimize gas line alteration.

Cabinet installers are cutting off waste lines and water lines instead of drilling holes for pipes. It is recommended that the Vent T not be glued where it enters the wall so that the cabinet installers can remove same, drill and install cabinets, then replace.

NOTE: Picture of Waste Line



HEATING

1. Make sure the filter is in the furnace.
2. Replace filter after temporary heating period.
3. If temporary screens are used on ducts, ensure that they remain intact.
4. Ensure that construction garbage is not allowed to accumulate in ducts.

5. All ducts should be thoroughly cleaned before final heating is done.
6. Ensure that temporary gas and power connections go through knockouts.
7. Ensure that access panels are left in place.
8. When two furnaces are used, ensure that the furnaces are controlled by the appropriate thermostat.
9. Location of the thermostat should be pinpointed by heating person.
10. Builder should ensure that the manufacturer's booklets are given to the homeowner.

COLD SUNKEN ROOMS

Every winter home builders are faced with complaints about uncomfortably cool sunken rooms by their customers. The customer often thinks the home builder or the heating contractor has undersized his furnace. This is rarely the case; but to provide proper heating for sunken rooms, some special considerations should be made in the design of the heating system. It is well known that cold air is heavier than warm air and therefore, tends to settle to the floor. This is further exaggerated when the home has a sunken room. Very often these sunken rooms contain either a patio door, fireplace or both; which allows more than an average amount of cold air to infiltrate and settle into them. Everytime an outside door is open, cold outside air rushes into the home and settles in the lower areas.

It is impossible to completely eliminate this problem of cool floors in sunken rooms but it is possible to greatly improve overall comfort by being aware of the problem these rooms create. Five steps should be considered:

1. Put more heat into these rooms than a similar room located at a higher level.
2. Always be sure a cold air return is located in the room to draw the cold air out and not allow it to remain dormant.
3. Consider running the furnace fan continuously in cold weather to reduce stratification.
4. Use patio doors, windows and fireplaces which allow a minimum of infiltration.
5. Education of the homeowner: If the homeowner understood why the floor in their sunken room was slightly cooler than in other areas they would do a lot themselves towards solving the problem, such as keeping their fireplace damper closed to reduce infiltration and running their furnace blower continuously in cold weather to draw the cold air out of their sunken room.

ELECTRICAL

PLASTIC ELECTRICAL BOXES

If using the plastic boxes your committee recommends that they be handled in one of three manners.

1. Do not attach to stud until siding is installed. (Where allowed by local authorities).
2. If mounting tabs (ears) break when attempting to move them the boxes may be installed by using wood screws through the side of the interior of the box.
3. Stud stops on the box may be broken off and the box installed approximately one inch out from the sheathing.

Your Siding Sub-committee recommends the third solution as having the most merit.

RECESSED INCANDESCENT LIGHTING FIXTURES USED WITH THERMAL INSULATION

A number of fires have occurred as a result of recessed incandescent lighting fixtures and recessed heat lamp fixtures being blanketed with thermal insulation.

The Canadian Electrical Code, Rule 30-310 (4), stipulates that recessed fixtures shall not be blanketed with thermal insulation unless the fixtures are approved and marked for the application. Recessed incandescent fixtures, however, are not at present approved and marked for use when blanketed with thermal insulation. Therefore, pending the availability of such fixtures the presently approved standard recessed incandescent fixtures will be considered acceptable when thermal insulation is used, subject to the following:

1. The rating of a lighting fixture is not to exceed 150 watts. Infrared heat lamp fixtures are to be the single lamp type not exceeding 250 watts.
2. The lamp used is to be the type specified on the fixture marking and the size of the lamp is not to exceed the maximum wattage indicated on the fixture. Incorrect lamping can cause excessive temperatures. Do not substitute a standard type lamp for tne reflector type, unless the fixture is so marked.
3. Restrictive decorative trims such as louvers, stars and pinholes are not to be used on round (Pot) type fixtures.
4. The fixture is to be enclosed in a substantial housing constructed of material such as ½ inch plasterboard or ½ inch plywood to prevent the insulation from contacting the fixture body.
5. The minimum cubic inch volume of the housing is to be based on the maximum wattage rating, as marked on the fixture, multiplied by 20.

6. A minimum clearance of 6 inches is to be provided between the top surface of the fixture and the top of the housing.
7. The fixture is to be centered in the housing, except where this is not practicable, the minimum clearance on one side may be reduced to 1 inch.

The person or firm doing the electrical work is not to install recessed lighting fixtures where they will be subject to being covered with thermal insulation, unless suitable housings are provided when the recessed fixtures are installed.

Example: What would be the required interior dimensions for the enclosure housing a recessed incandescent lighting fixture having a rating of 150 W? The height of the fixture in this example is 230 mm (9.06 in.).

VOLUME

The interior volume of the enclosure for 150 W rated fixtures is 0.05 m^3 (3,051 $in.^3$).

HEIGHT

The total height of the enclosure would be the height of the fixture plus 150 mm (5.91 in.):

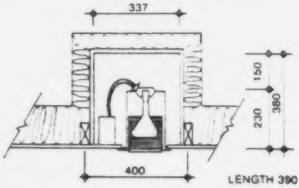
Height of Fixture	230 mm	
Plus	150 mm	
	380 mm	(14.96 in.)

WIDTH

The maximum width of an enclosure placed between trusses which are spaced at 400 mm (15.75 in.) on centre would be approximately 337 mm (13.27 in.).

LENGTH

The length would be:



$$\text{Length (L)} = \frac{\text{volume}}{\text{width} \times \text{height}}$$

$$L = \frac{50\,00\,000\ mm^3}{337\ mm \times 380\ mm}$$

$$L = 390\ mm\ (15.35\ in.)$$

NOTE: All dimensions in millimetres

Conclusion:

The minimum interior dimensions of the enclosure should be:

length - 390 mm (15.35 in.)
width - 337 mm (13.27 in.)
height - 380 mm (14.96 in.)

Problem

Breakdown in concentric cable used for underground electrical service.

Causes

1. Debris in the service trenches.
2. Bending of cable around sharp concrete foundation walls.
3. Improper removal of cable from wooden plywood storage boxes, especially during the winter months.

Recommendations

1. A journeyman electrician should check the cable for damage and install with care.
2. On site supervision to ensure all debris such as sharp rocks, bricks, banding etc., have been removed from trenches prior to backfilling.
3. When frozen ground conditions exist, extreme care should be taken to locating and opening the storage boxes so as not to damage the concentric cable.
4. Place concentric cable inside flexible plastic piping for additional protection from debris and frozen ground conditions.

INSULATION

The importance of a proper insulation application has often been overlooked. The public awareness of energy conservation and increasing R.S.I. (R) values is changing this attitude. But simply increasing the amount of insulation applied is not the total answer. The quality of application may be increased significantly with attention to the points outlined.

WALL INSULATION

Prior to the installation of bat insulation ensure that:

1. Western (block) corners are insulated.
2. Exterior wall outlets are insulated behind.
3. Windows and doors are packed and/or caulked.
4. Bat insulation is applied behind plumbing stacks on outer walls.

Prior to the drywall application, the following areas must be batted in with vapour barrier to inner surface:

a) Cantilevers
b) Cottage roofs
c) Dutch cottages
d) Non-accessible attic areas

A good practice to check wall insulation is to stand back 10 - 12 feet. From this distance the application should look consistent with corners tucked in properly.

ATTIC INSULATION

Attention to the following points prior to application will contribute to a proper trouble free insulated attic.

1. Shaving stops are required around areas that are not to be insulated. e.g. garages, extended roof areas.
2. Ensure access to front gables.
3. Keep wiring as far as possible from exterior wall areas (5 - 6 feet).
4. Install all fans and vents prior to attic insulation.
5. If heating is required prior to attic insulation application, leave attic access open so heat will penetrate both sides of drywall.
6. Apply plywood or drywall to ceilings in such areas as tub and shower enclosures and closet areas over split levels.
7. Pot lights in attic areas should be boxed in as required by code. See the Alberta Building Standards Standata, October, 1978.
8. Collars should be applied around chimney chase so a non-combustible material (zonalite, rockwool, vermiculite, etc.) may be applied. Refer to the Alberta Building Code 1981. No material is allowed to infringe on chimney clearance except for firestops or spacers.

   DO NOT WRAP CHIMNEY CHASE OR COVER RECESSED POT LIGHTS WITH ANY COMBUSTIBLE MATERIAL.

VAPOUR BARRIER

1. All exposed wood (interior) and insulations should be covered with polyethylene.
2. Polyethylene should always run with joists and only tacked around perimeter of the sheet. Soffit sheeting should already be applied to prevent wind damage to the ceiling polyethylene.
3. Polyethylene to walls can be applied the same as ceiling if wall exceeds eight feet, otherwise it can run across.

4. Polyethylene to corners of walls should be tucked back at least two inches to allow polyethylene to reach studding in corner.
5. If an overlap is needed on polyethylene twenty four inches is required.
6. Polyethylene should always be installed behind outlets on all exterior walls.

INSULATION

1. Cantilevered floor sections which extend beyond 2 feet are very difficult to insulate from inside once exterior sheathing is in place. It is strongly recommended that cantilever floors be batted by framers before closing in.
2. Ceilings below low slope (2/12 pitch), cottage or dutch cottage roofs require special attention. Low slope ceilings are difficult to blow with loose fill and should be batted prior to boarding. Similarily, wall applicators should batt ceiling area in corners of cottage roofs and at least 4 feet out from wall on dutch cottage roofs.
3. Electrical wiring runs should avoid the exterior wall whenever possible. Main trunk lines from the service box should be routed between basement joists to a point where the vertical run can be made within an interior partition.
4. Electrical wiring in an attic can obstruct application of loose fill insulation if runs are less than 6 feet from eave wall. Wiring runs should not cross attic hatch openings.

THERMAL INSULATION

Problem

Condensation in attics and sloped (cathedral) ceilings, with resulting water leakage around ceiling openings.

Causes

1. Dead air space, on the cold side of insulation, will allow moisture in the air to condense without means of absorption or removal into the atmosphere.
2. The vapour barrier is broken.
3. The openings for electrical wires are not properly caulked.

Recommendations

1. Adequate ventilation above insulation, distributed uniformly on all sides of the building or sloped area is required by the Alberta Building Code.
   — Minimum venting requirements for attic spaces: ratio 1:300 i.e. 1 sq. ft./300 sq. ft., or 1 sq. m/300 sq. m of attic space

— Minimum venting requirements for low slope attic areas (2:12 or less), and cathedral ceilings: ratio 1:150 i.e. 1 sq. ft./150 sq. ft., or 1 sq. m/150 sq. m of attic or sloped area

with cross strapping above joists as required to allow at least 6" (152.4 mm) clear air space between top of insulation and roof deck.

2. Use of tight fitting insulation baffle stops along eaves to ensure proper ventilation clearance and prevent displacement of loose fill type insulation.
3. Avoid excessive relative humidity levels in living space.
4. Exhaust fans must be ducted to open atmosphere, openings around chimneys and plumbing vents must be sealed off at ceiling level.

DRYWALL

DRYWALL — TAPING AND JOINTING PREPARATION

The construction industry occasionally leans heavily on the drywall trade to complete houses that are inadequately heated. It is our feeling that proper heat and adequate air circulation must be maintained. A minimum temperature of 12.7 C should be maintained day and night all through the application of gypsum wallboard, taping, and finishing. Temporary heat provided by salamanders, space heaters, or unvented gas burners is unsatisfactory. Furnaces in basements where no floors are poured and no ductwork installed will not provide proper circulation of heat.

Cold, damp weather will result in slow drying of all types of joint and finish compounds. Under adverse conditions, 24 hours of drying time between is often insufficient. Finishing over base coats which seem to be dry, but are wet underneath is the principle cause of job failures and delayed shrinkage of joints and corner bead. Joint cement which remains wet for a prolonged period of time tends to shrink excessively. With inadequate heat, this shrinkage will occasionally be delayed until the house is completely finished, painted, and the homeowner has taken possession. This results in corner bead appearing to have the finish coat missing, joints beading and flats not properly filled.

These are the reasons drywallers prefer to work in houses with thermostatically controlled heat which can be maintained throughout the drywall phase of work. If taping and joint cements are allowed shrinkage during the first application, finish cements will shrink very little, if at all.

DRYWALL

Problems

Problems associated with drywalling usually manifest themselves as a combination of bumps and/or cracks in the finished surface. The steps necessary to eliminate many of these problems are based on two fundamental principles:

1. **Rigid** wood structures still **move.**
2. **Drywall** starts out **wet.**

Moving Structures

It is inevitable that shrinkage will occur in framing members especially during the months just after framing. When drywall board is applied to such a shrinking structure, it is equally inevitable that some movement will take place between the lumber and the board. In itself, this motion is harmless, since drywall board is somewhat pliable and can yield to absorb the changes. However, problems occur when shrinkage occurs after taping of the board - the rigid and brittle nature of the drywall cement is very intolerant to any movement of the drywall to which it adheres. Thus the movement of a nail or a screw will cause a bump to appear on the surface; movement of drywall at corners will cause corner bead to break loose and longitudinal shrinkage of wall members will cause compression at butt joints with bulging of the tape and cement. This corner phenomenon is often seen where built up beams of 2 × 10 or 2 × 12 lumber are exposed below joists and are dressed with drywall. As the 2 × 10's or 2 × 12's shrink across their width, a pull is exerted on the lower drywall face, which often causes the upper edge of the corner bead to crack loose.

Wet Drywall

Drywall board is basically a dried out slurry encased in paper. When exposed to high moisture it tends to absorb water which may cause it to loose its mechanical strength and may cause it to warp if placed under load (e.g. ceiling insulation). Such high levels of moisture can occur when concrete basement floors are poured **after** the drywall phase or when water based spray paints are used as in stipple textures.

Drywall taping cement is, of necessity, wet and must be allowed to dry properly if an acceptable finish is to be achieved. This requires that the cement dry thoroughly before subsequent coats are applied and within a reasonable length of time, (typically 24 hours). Freezing of cement is of course disastrous, since adhesion can never take place. Cracked joints normally result from improper drying of cement.

Recommendations

1. Ensure that the drywall you are receiving is dry.

Drywall should never be stored outside.

2. Synchronization of various phases is critical. Basement floors must be in and heat applied before drywalling begins. A temperature of at least 12° C must be established and maintained throughout the drywalling and taping process.
3. All duct work should be in place before drywall is installed.
4. Cracks over doors and windows can be minimized by extending the header rather than stopping it at the edge of the door.
5. All cripples should be installed snugly after the roof is on.
6. The use of 1¼" screws will minimize pop. There is no appreciable extra cost and they are faster to apply.

Drywall Material Itself

A. Sagging drywall (especially on ceilings).

B. Roughness of finished surface.

Both of these problems are attributable to dampness combined with other factors, and can be minimized by attending to the following points:

1. **Store Drywall in a Dry Location**

   Indoor on-site storage is obviously best. Outdoor storage can be tolerated if a waterproof cover is provided and if the material is returned indoors for at least three days prior to application. Conditions are worse in the high humidity seasons of spring and fall.

2. **Stack Drywall Sensibly**

   Store longer sheets on the bottom of the pile. Where spacers are used, they should be positioned vertically in line and horizontally every three feet.

3. **Avoid Handling Damp Drywall**

   Drywall delivered in adverse weather conditions should be protected by a weatherproof cover. Wet drywall should not be accepted on-site.

4. **Avoid Excessive Dampness During Application and Before Sealing with Paint**

   Basement floors should be poured either before application of drywall, or after application of primer coat. Ensure paint has dried before application of ceiling texture. Ventilate all heated areas during taping, painting, and spraying.

5. **Consider Implications of Roof Design**

   Roof trusses spaced at 24" O.C., heavier insulation loads, water based texture products, and higher humidity in tightly sealed houses can combine to overload ½" drywall normally used on ceilings. Tests are being conducted in this area results and recom-

mendations will be printed when they are available.

6. **Use Care in Applying Paint to Drywall**
   Do not dilute primer/sealer. Where airless spray is used, always back roll the primer coat, sand surface between primer and finish coats. The success of the drywall/paint combination depends heavily on the primer/sealer operation. The use of good painting practices by skilled tradesmen will assure that success.

SAGGING OF GYPSUM BOARD ON CEILINGS

The Technical Committee of the Gypsum Manufacturers of Canada has issued a recommendation memorandum covering precautions which can be taken to prevent the sagging of gypsum board on ceilings.

For many years gypsum wallboard has been used successfully as a cladding for ceilings.

However, changes in job practices over the years have created conditions that have imposed limitations on the thickness of board that should be used and on the maximum spacing of framing members.

Some of these changes have been: the use of more effective vapour barriers behind the gypsum board; the use of trusses at 24" O.C. instead of joists at 16" O.C.; decorating with a water-based texture; pouring of basement floors after board installation; closing up units to prevent vandalism; increase in the thickness of insulation for conservation of energy.

All these changes create an environment in which a gypsum board is more susceptible to sagging.

Following are recommendations from the Technical Committee to minimize the potential of sagging in gypsum board ceiling.

Sagging in gypsum boards used on ceilings is influenced by a number of factors, but the presence of moisture either in the form of liquid water or water vapour (high relative humidity) is always a factor and the greatest single problem. Other factors are:

1. Spacing of framing members. The maximum allowable spacing is set out in CSA A82.31-1977 Application of Gypsum Board.
2. Application of tight vapour barrier behind the gypsum board preventing moisture escaping from the back of the board.
3. Installation of insulation on top of gypsum board imposing an excessive deadload. Maximum loads for gypsum board are:

Board Thickness	Spacing of Framing	Mass of Insulation
12.7 mm (1/2")	600 mm (24")	6.35 kg/m² 1.3 lb./ft.²
12.7 mm (1/2")	400 mm (16")	10.75 kg/m² 2.2 lb./ft.²
15.9 mm (5/8")	600 mm (24")	10.75 kg/m² 2.2 lb./ft.²

Precautions to Minimize Potential of Sagging

1. Ensure framing spacing is adequate for thickness of board to be used. Ensure board is applied perpendicular to framing.
2. Determine that excessive weight of insulation will not be added.
3. Control the relative humidity within the structure by providing adequate ventilation before, during and after board application (watch for pouring of basement floors after board application).
4. In cold weather maintain inside temperature between 10°C and 20°C. Where portable heaters are used, make sure to remove the extra humidity they produce.
5. Ensure the gypsum board is thoroughly dry and at ambient temperature before application.
6. Ensure joint treatment is thoroughly dry before applying any decoration.
7. Ensure that paint and primer coats are dry before the application of successive coats. Where waterbased spray texture is to be used as a finish, ensure that a good grade sealer (preferably an alkyd) is used to reduce absorption of water into the gypsum board.
8. Where gypsum board supports ceiling insulation and is finished with a spray texture paint, use only 15.9 mm (5/8") gypsum board applied perpendicular to the framing members, and where severe adverse conditions are anticipated reduce framing spacing to 400 mm (16") O.C.

EDITORIAL NOTE:

Framing spacing may be reduced by adding cross strapping at 400 mm (16") O.C. to the underside of roof trusses spaced 600 mm (24") O.C.

HUDAC Technical Research Committee - ISSN 0705-1042

Problem

Wavy or uneven ceilings.

Causes

1. Uneven trusses.
2. Uneven joists.
3. Drywall improperly handled during damp weather.
4. Basement floors poured during drywall operations.
5. Shavings used for insulation.

Recommendations

1. Trusses should be checked to make sure they are even.

2. Care should be taken during installation of bridging.
3. Drywall should not be delivered, or stored outside, during damp weather conditions.
4. Floors should be poured prior to drywall operation or after ceiling is sprayed so the drywall is sealed.
5. Shavings are very seldom used for insulation and, if used, should be dry and well vented.

FURTHER COMMENTS

Prompt application of sufficient attic insulation is recommended.

WINDOWS

OPERATING WINDOWS

1. Installation Deficiency - windows not properly "squared, plumb and true" in the wall opening at time of installation by framer (or placer).

   Resulting Problems:
   a) Water leakage through corners of frame
   b) Entry of flies around screens
   c) Abnormal air "seepage" in summer. Ice build up in winter
   d) Poor operation of sash
   e) Locking problems, etc.

2. Installation Deficiency - windows not properly blocked and secured by framers.

   Resulting Problems:
   a) Sagging of sill puts inserts out of square in frame
   b) Loose frame in openings
   c) Parting of frame at corners

3. Installation Deficiency - "bowing" of head or sill

   Resulting Problems:
   a) Improper function of window
   b) Insert that cannot be removed from frame
   c) Mis-alignment of weather seal causing air leakage and icing problems, etc.

The logical place to start in reducing window problems is with the framer. He should ensure that the windows are installed TRUE AND PLUMB AND ON THE LEVEL. He should block the corners (at right angles) at sides, top and bottom. He should then take metal bracing (stripping) and "tie" down the frame on the inside at the blocks. This secures the frame from being pushed inwardly by other trades. The average window will take 10 placing blocks and 10 metal tabs.

Once the frame is properly secured, the window should be checked for ease of operation, sash removal and trueness in the frame.

The insulation installers should take care that they do not "bow" the frame inward by excessive packing of insulation around its perimeter. The drywall installers should cut their drywall slightly undersized to insure that the drywall does not pressure the frame inward.

A continual problem is the practice of many sub-trades and suppliers in removing windows and/or screens to gain access to the building for their products (e.g. insulation, drywall, sand and masonry). This practice frequently results in damage to the entire window unit and should be discouraged.

After all windows are installed, they should be properly caulked between the exterior casings and the exterior sheathing to weatherseal the outer perimeter of the unit.

SEALED UNITS

Leakage of a sealed unit at its perimeter (the meeting of the glass to the wood carrier frame) in most instances is due to the lack of one or both of the following caulking barriers.

Air Barrier; being the caulking that is required on the interior of the frame at the window to stop, or stop to jamb area that could otherwise allow air movement.

Water Barrier; being the caulking that is required on the exterior of the frame at the window to stop, or stop to jamb area to eliminate any possible water entry.

A rabetted type stop usually minimizes the problem of leakage over a plant-on type, but if installed properly, either will do the job effectively.

Blocking

A sealed unit, when installed into a wood frame, should have its full weight resting on two setting blocks positioned at the bottom edge of the sealed unit approximately ¼ of the distance in from either side of the total width of the glass (e.g. A 96" wide sealed unit has blocks located approximately 24" from either end). Under certain conditions the position of the setting blocks may vary. This is to balance the units carrying weight into the frame. The framer should install the sealed unit frames in the following manner:

1. All corners should be blocked at both sides. e.g. Top and side and bottom and side.
2. Loose blocking should be placed at the centre of the top of the frame once the frame is aligned true and plumb. The sill should be blocked approximately ¼ distance from end in line with sealed unit setting blocks.

3. Frames should be securely anchored in opening through exterior casing, continually checking the trueness of the frame.

Following this practice should minimize frame movement and maximize efficiency of proper installations.

Caulking

A high grade proper caulking should be used. (e.g. paint will not adhere to silicone).

The sealed unit installer should always lay a bead of caulking over all joints of the lower window frame, and in the corners, and partially up the side jamb insuring areas susceptible to water contact are properly caulked.

Caulking should be painted. Paint film should cover caulking and extend onto glass. Paint should not be applied for 2 days following caulking.

WOOD DOORS

WARPAGE

1. Warpage of wood doors is most commonly caused by one or several of the following conditions:
   a) Moisture (humidity)
   b) Temperature variation
   c) Thermal bow
   d) Variation of expansion/contraction coefficients
2. Species of doors available (listed in order from probable **least** warping to the more probable warping door):
   a) Cedar
   b) M.D.O. (medium density overlay) paint grade door
   c) Fir
   d) Mahogany (luan) hollow core
   e) Mahogany (luan) solid core
   f) Birch
3. The majority of door manufacturers use finger jointed styles and rails to reduce movement caused by moisture. On exterior doors, exterior grade (type 1) glue is used for lamination. Most other glues are water soluble and cannot withstand extreme weather conditions.

HANDLING

1. Door delivery to site should be no sooner than 10 to 14 days after pouring of concrete floor or 3 to 4 days after final drywall taping. The heating system should be operating at a constant temperature of +70°F to ensure stabilization and uniformity of heat and humidity throughout the dwelling.

2. Temporary propane heating should be discouraged as burning propane increases the humidity in the home.
3. Doors should always be stored "on the flat". The only time doors should be in a vertical position is when they are hanging by their hinges in a door frame. After the door is trimmed and fitted by the finishing carpenter it should be returned immediately to a flat storage position. An unfinished door should not be left hanging.
4. The builder should review his heating plans to ensure that all heat registers are at least four feet from any door (interior or exterior) and that no heat register feeds heat directly onto the surface of the door.

FINISHING

1. Prefinished doors are not classified by the manufacturers as sealed as lacquer is not a sealer. Your committee knows of no prefinished sealed door available on the market as of this date.
2. The first thing one should do is seal the doors before any other painting is done in the home.
3. Open Grain Interior: Doors such as Mahogany should be filled with a wood filler followed with a good quality lacquer or varnish. (For a paint finish use an enamel undercoater). A fill seal product is also available.
4. Open Grain Exterior: The outer grain should not be filled. They should be finished with a manufacturer recommended exterior finish paint.
5. Close Grain: (Fir, Birch, Cedar, etc.). For a natural finish, stain, seal, and then apply a finish coat. For paint grade, undercoat and then paint with a desired sheen finish.
6. In all cases, finish according to manufacturer's instructions and be sure all areas of the door are treated equally to ensure a minimum of moisture penetration.
7. After the doors are dry they should again be stored on the flat until hanging.

NSTALLATION

t is imperative that door systems be squared true and lumb by the framer when installed into the rough opening. o ensure a proper fitting door the walls must be true.

DJUSTING

1. Once they are finished and hung in the frame, doors to all rooms should be left partially open until occupancy. This allows for a properly balanced humidity stabilization of the doors. Failure to do this could cause a higher degree of moisture on one side of the door causing warpage.

2. Planing or shaving down of doors by the finishing carpenter, where possible, should be eliminated. If planing or shaving must be done to the height, the top and bottom edges should be trimmed equally. If the width is to be reduced, trim the lock side slightly as trimming of the hinge side reduces the strength of the door. Remember, the styles in most doors are only 1 1/8" (C.S.A. standard).

3 Adjusting of doors after occupancy in many instances could be better done by adjusting the telepost on the beams to correct for settling rather than shaving down a door. Once a door is shaved it has lost its seal and must be resealed immediately.

EXTERIOR METAL DOORS

The major complaint received by your Warranty Program has been poorly fitting doors.

PROPER INSTALLATION

It is imperative that door systems be squared true and plumb by the framer when installed into the rough opening. It should then be properly anchored with nails on sides and top through casing as well as blocked at sides and top, and at hinge and lock points to give a solid installation. If extra long hinge screws are supplied they should be installed.

TOO LIGHT A FRAME

Experience has shown that a six quarter (1½") jamb (frame) should be used to carry the weight and stress imposed by a steel door. A wood sub-sill under the metal sill is much stronger and more serviceable.

CHARACTERISTICS IN THE MAKE-UP OF THE DOOR

There are two basic types of doors on the market today. They are A) Wood style doors, or B) Metal style doors.

N.B. The style is the inner frame of the door that the outer metal skin is attached to.

The amount of thermal bow can be directly related to the type of door used as the steel style does not allow the same thermal movement as the wood style door.

Thermal bow is the expansion or contraction of the outer skin with temperature change. e.g. −30°C., the outer skin contracts thereby pulling on the top and bottom style member. If the door is designed to absorb part of this contraction your thermal bow will be minimal up to 3/32 of an inch). If the door is not so designed the thermal bow has been reported as high as ½ inch plus. When this occurs an outward force from the bowing puts a severe inward force at the lock location of the door. This causes problems in opening or closing the door (too tight), doors popping open, broken hardware as well as requiring any surface weather

stripping to be adjusted. To help combat this situation it is recommended that a spacer be attached to the door jamb at the locking point to allow free space between your door and jamb for thermal bow. Statistics show that an in-the-jamb weather stripping will compensate for any thermal bow movement in the door. Remember, magnetic weather stripping is effective only to approximately – 10°C.

IMPROPER WALL ALIGNMENT

Construction superintendents should check steel doors immediately after installation for misalignment of walls from left of door to right of door. Misalignment can cause the door to close neatly at the top but not the bottom or visa versa.

DOOR ADJUSTMENTS PRIOR TO OCCUPANCY

All doors should be checked by a competent employee just prior to occupancy to ensure that:

1. The lock is not too tight.
2. The sill sweep is properly adjusted.
3. The weather stripping is properly adjusted.
4. If adjustable threshold (sill) is used, adjust if necessary.
5. Check for ease of swing and operation.

PATIO DOORS

"Out of square" frame is a major problem. Frame must be well blocked at corners and up three feet on sides. Blocking at lock point is critical. Loose blocking should be placed at centre of header.

Sill should sit on sub-floor and be shimmed where necessary. ½" bead of caulking should be provided between sub-floor and sill on interior and exterior edge to provide an air and water barrier.

Setting the sill on a thin layer of insulation will also minimize drafts.

To minimize damage it is imperative that patio doors not be used as access for bricklayers, drywallers, etc.

CABINETS

At a recent meeting of cabinet manufacturers and suppliers, several complaint areas were identified. Your committee's suggested solutions are shown below the problem areas.

1. **Problem**

   Warped cabinet doors (particularly noticeable in vacant homes).

   Probable Causes

   Due to the climate and lack of correct humidity coupled with excessively high temperatures, warpage occurs.

   Solution

   Use of a locking thermostat should be considered. The ideal temperature of a vacant house is between 13 and 15 degrees celcius. The humidifier should be hooked up and in use whether the house is occupied or not.

2. **Problem**

   Dislocation of cabinetry and/or counter tops. Cabinet soffits coming out of track. Counter top pulling away from wall. General shrinkage of framing.

   Probable Causes

   Uneven shrinkage of joists and other framing members. Failure of homeowner and/or builder to adjust teleposts to accommodate settling.

   Solution

   Use of lag bolts through counter to studs will minimize shrinkage irregularities. Proper beam alignment should be adjusted prior to occupancy and checked regularly, particularly during the first year of occupancy.

3. **Problem**

   Damage to tops and cabinets after installation.

   Probable Causes

   Kitchens are being used as storage and workshop areas by other trades. (Example: Some plumbers knock off sink fronts unnecessarily with a hammer prior to installing a sink; installing a sink; some painters splatter paint on finished wood components); other trades use tops as workbenches, lunch counters, etc.

   Solution

   Site supervision by trades and builders is required. Job site superintendents are critical to minimize damage to the house under construction. It is important that scheduling of all tradesmen be designed to avoid conflict.

   The supply of quality hardwoods is a continuing problem and the industry is faced with using softer varieties which are easier to damage and will necessitate more care being used by all concerned to eliminate any increase in the quantity of damages.

FIREPLACES

FIREPLACES (FACTORY BUILT - ZERO CLEARANCE)

The number of consumer complaints reaching your Warranty Program concerning fireplaces has increased to a considerable degree. The source of these complaints is invariably installation procedures and not the units themselves. Attention to the following points may minimize these complaints.

1. All manufactured units must have U.L.C. approval labels as outlined in the Alberta Building Code.
2. Prefabricated fireplaces are completely tested systems. All of the manufacturers components must be used as tested. (Ask manufacturer for manufacturing card and ensure all components adhere to approval card).
3. Pipe clearance is important. No reductions in manufacturers recommendations are permissible. (e.g. Use of asbestos, etc.).

The following points should be checked on all installations:

1. Check damper operation for proper operation. (Consider the use of a position indicator).
2. Is unit securely locked in place with framework, headers, and blocking?
3. Is fireplace level? Is the front facing flat and plumb and is wallface level?
4. Ensure that the firebox has not been drilled to accommodate a log lighter. Log lighters should not be installed in units which are not equipped with knockouts.
5. Ensure that a sufficient supply of outside make-up air is provided either by natural or mechanical means.
6. Are firestop-spacers securely in place so they cover the excess area cut in floors and ceilings for passage of the chimney?
7. For units requiring room air for cooling, are air intakes free of obstructions?
8. Are combustible materials kept clear of front facing of unit?
9. Has combustible trash or construction debris been removed from contact with the fireplace and chimney?
10. Are all chimney components securely fastened and substantially vertical?

The Alberta Building Code 1981 is explicit on mantels and hearth extensions. A number of infractions in these two areas indicate they bear repeating.

MANTELS

Any combustible material which projects more than 1½"

out from the face of the fireplace must be at least 12" above the top of the opening. (Rule of thumb for mantels - minimum 12" above opening, minimum 1" up for 1" out above 12". e.g. 8" deep mantel - 20" above opening).

HEARTHS

Non-combustible hearths must extend a minimum of 16" in front of opening and not less than 8" beyond each side of opening or as shown in manufacturer's instructions.

PAINTING AND INTERIOR FINISH

PAINTING

At a recent meeting of paint suppliers and sub-contractors the following recommendations were formulated.

1. Make sure all windows, frames, and sills are thoroughly back primed.
2. Weep holes in sills must be protected. Any unprotected area will induce wood rot and paint peeling.
3. Exterior painting should not be done late in the day. Humidity rises at this time and deteriorates paint.
4. Pre-finished exterior material should have a finish coat. Joints, nail entry holes, etc. give moisture penetration areas.
5. Garage doors are normally pre-primed. Make sure this includes hardware areas and top and bottom of panels.
6. Basement floor should be in before any interior painting begins.
7. The use of an alkyd sealer beneath stipple will minimize moisture bleedthrough.
8. Make sure the home is clean, furnace filters are in and no other trades are in the home when painting is being done.
9. All door edges must be painted, two coats are recommended. On all other interior surfaces your committee recommends three coats.
10. The airless spray method of application results in intermittent coverage. To obtain a professional finish the surface must be backrolled following spraying.

The largest problem facing painters is a poor surface. Supervision and control in this area will ensure a professionally finished product.

INTERIOR DRYWALL

Problem

Roughness of drywall paper near or around taped and filled areas.

Causes

Excessive sanding and grit of sandpaper used too coarse.

Recommendation

Avoid excessive sanding on drywall paper and sandpaper used should not be coarser than #100 grit.

DRYWALL - PAINTING

1st Coat

Dust off walls and ceilings to be painted using broom to remove loose texture and dust. Apply one coat good grade P.V.A. latex sealer by roller or spray - If sprayed sealer should be backrolled using roller pile of 3/7" or less. P.V.A. sealer should not be diluted.

2nd Coat

Prior to applying additional coats, surface must be inspected for defects, repair and patching to be done at this stage. After properly sanding patched areas same must be sealed with P.V.A. sealer using same method of initial application.

Before applying the next coat, the complete surface must be sanded using sandpaper of #120 grit or finer. After dusting the surface is now ready to be painted.

Subsequent coats require sanding between each application.

Plaster

Substitute P.V.A. sealer with alkyd undercoater, finish as outlined above 2nd coat.

New Wood - Painted

One coat alkyd enamel undercoat, after a sufficient period for drying, fill nail holes and imperfections using putty, spackle or plastic wood. Before next application sand smooth and remove all dust off surface.

New Wood - Stained

Smooth grained wood such as Pine, Fir and Hemlock - apply stain, after proper drying seal with clear sealer followed by one coat varnish - option - after staining apply two urethane.

Open grained wood such as Oak, Ash Mahogany use fill and seal or paste wood filler tinted to desired color to fill pores in place of stain, finish as above.

EXTERIOR

New Wood

Windows, doors, door frames and siding to be back primed with good grade exterior primer, insuring complete coverage of all edges. This must be done before application of stucco, brick metal or wood siding in order to prevent moisture to enter wood and avoid failure of coating.

After primer has dried, fill all nail holes and cracks with putty, sand smooth, clean off dust, surface can now be finished using exterior coatings.

On windows paint should extend onto glass and cover caulking completely.

Siding Stained

First coat stain should be applied to both front and back of surface as shrinkage may occur thus exposing unstained surface. After installation finish coat can be applied.

Metal - Galvanized

Clean with mineral spirits to remove all oily substances to be followed by one coat primer especially formulated for galvanized metals.

Metal - Steel

Lintels, steel frames; clean and prime with one coat red oxide primer followed by exterior paint.

The above specifications are considered to be minimum application for the surfaces listed as recommended by the Alberta Decorating Council painting specification manual.

CEILINGS

Problem

Discolored ceilings.

Cause(s)

1. Ceiling sprayed when the house is insufficiently heated in cool and damp weather. This seems more common in ceiling texture using perlite base, rather than styrofoam base, which does not take on moisture as easily.
2. Furnace, or temporary propane heater, improperly vented at time of spraying (chimney not connected, etc.).
3. Lack of sufficient insulation in attic along outside walls and at ceiling and wall junctions, where poor insulation stops allow the wind to displace insulation.
4. Where metal gang nails are used in trusses (the cold bridge causes condensation through lack of insulation).
5. Humidity too high in house.

Recommendation(s)

1. Heat is necessary at the time of drywall operation to allow the joint filler to dry quickly.
2. Furnace or heater should be properly vented.
3. Proper insulation stops are necessary.
4. Attic access hatch should be in place at all times.

SIDING

ALUMINIUM SIDING

Problem

1. Starter strip not long enough
2. Irregular concrete

Recommendation

Starter strip should be a minimum of ½ to ¾" below rim joist. Every effort should be made to ensure that concrete is as smooth as possible before installing starter strip.

Problem

Gaps between window and siding. (Insufficient backing causing heat loss).

Recommendation

There should be no more than a maximum 3/8" gap between plate and sill to allow for proper installation.

CEDAR SIDING

It is advisable to pre-stain cedar wood when used in conjunction with stucco to prevent oil stains. Flashing must be used to separate the two materials when an upper overlap does not exist. The use of hot dipped galvanized nails or aluminum nails will further prevent bleeding and staining of cedar.

Blocking or strapping on 2' centres is required on all vertical siding applications.

STUCCO

Problem

Concrete or stucco splashes.

Recommendation

Immediate removal of splashes is imperative in order to avoid staining and possibly resulting in the replacement of the siding.

Problem

Stucco cracks.

Recommendation

An excessive amount of lime or too fine a grain of sand will result in extensive stucco cracks. The Alberta Building Code specifies correct mixes.

MIXTURE IS CRITICAL.

Problem

Window and batten staining.

Recommendation

Be sure window frames and battens are primed prior to stuccoing.

GENERAL COMMENTS

1. When siding is installed within 6" of foundation, it is recommended that paper be applied to overlap concrete 1" to 2". When the siding is to be placed more than 6" above basement, the paper must extend a minimum of 4" below siding in order to accommodate future paper overlap.
2. To ensure proper water proofing after stucco has been applied, horizontal battens should be completely flashed before vertical battens are installed.
3. Paper behind battens is a must. An overlap of 4" is recommended.
4. When stucco meets shingles, stucco should be left 1" above shingles by means of a plaster stop or milcore.
5. Plaster stops must be used under dryer vents to allow flapper to open. Failure to ensure free flapper opening may result in fire or dryer burn out.
6. It is imperative that sheathing paper applicator completes the installation in its entirety. Wind damage frequently results in an unfinished application.
7. Ensure that siding applicator has nails of sufficient length to permanently affix the corners.
8. Damage to siding frequently results when fittings, vents, etc. have not been completed when siding is installed. Ensure that all potential bibs, vents, etc. have been installed before the siding applicator is called.

SIDING

Problem

Rim joist shrinkage at floor levels resulting in loose siding.

Recommendations

Half vertical and half horizontal siding application is one solution to this problem. Another suggestion is to install sheathing over all rim joists. If this recommendation is to be followed it should be installed by the builder during framing. Another recommendation is, when installing the siding that is covering the rim joist, the siding be pulled up (stretched upward) tightly as possible.

NOTE: The use of backerboard is recommended. R value will increase from .7 to 1.4.

Problem

Rattling or noisy soffits.

Recommendation

Four foot or greater overhangs must be blocked down the centre of the overhang to provide backing for the soffit material.

Problem

Fascia bulging on low slope gable ends.

Recommendation

The existing practice is to use ¾" drop and ¼" drip galvanized roof flashing on low slope installations. Your committee recommends that 1¼" drop and ¼" drip be used. This will eliminate the need for a soffit L trim.

Problem

Fascia expansion and contraction.

Recommendation

Fascia must be allowed to float free to compensate for expansion and contraction due to temperature changes. Face nailing will not allow this movement and therefore, should not be used as a construction technique.

Problem

Damage to shingles on gable ends of 4/12 pitch and greater roofs.

Recommendation

L trim should be installed prior to the installation of asphalt shingles. An alternative is to use an undersill trim in lieu of the L trim but due to expansion it is not the better choice. (This applies to aluminum only and not steel).

ASPHALT SHINGLES

DECKS

The use of 5/16" or 3/8" plywood on 16" or 24" centres is not a desirable roof deck for the application of asphalt shingles due to:

1. The bounce of the deck when shingles are nailed in place causing the loosening of previously secured shingles.
2. The vibration of the deck caused by wind action tends to break the self-sealing feature.
3. The nails protruding through the underside of the deck offer condensation points.
4. Chipboard is not recommended as it is very slippery to work on and its underside frequently chips away when nails or staples are applied.

To reduce the above problems shingle manufacturers recommend that a minimum of ½" (12.7 mm) plywood for roof decks be used.

SELF-SEALING

Properly installed asphalt shingles will usually self-seal during favourable weather conditions. If a full summer's weather does not achieve the self-sealing feature they must be manually sealed.

FASTENERS

Shingles are to be nailed as per manufacturer's specifications. If staples are used they are to be driven with accurately adjusted pneumatic staplers only. Fasten shingles to deck as per nailing instruction on the shingle package making sure that the crown of the staple is parallel to the length of the shingle. Staples are not recommended for re-roofing projects.

The manufacturers represented in the committee have all indicated a preference for the use of nails as a fastener of asphalt shingles.

EAVESTROUGH

While one tends to relate to eavestroughing as being a relatively straightforward procedure, our review of complaints reveals that attention should be given to the following problems.

1. **Problem**

   Water sitting against basements and in other low spots.

   Cause

   Landscaping (grading) is not completed, even to the final rough grade, to give the installers an idea where to put the downpipes.

   Recommendation

   Before calling for your eavestrough installation, consider the final grade, and instruct the installer accordingly.

2. **Problem**

   Stained exterior walls and roofs.

   Causes

   a) (Stained Walls). A lower roof joins a wall and is attached within the outer boundaries of the wall. The trough when installed prior to exterior sidings is left partially away from the wall. Water coming down the lower roof misses the trough, pouring down the wall next to it.

   b) (Stained Roofs). Where downpipes from an upper roof are spilled onto a lower roof, a stain or blotch may occur on the roof over a period of time.

Recommendations

a) (Stained Walls). Have the roofers slightly angle the bottom step flashing to divert the water into the trough, or call for the installation of trough only after stucco or siding is installed.

b) (Stained Roofs). Try to have water from upper roofs piped directly to ground, or if it is not possible then the installers should direct the elbow on the downpipe (from one roof to lower roof) away from the wall and install shingle splash pad under it.

3. **Problem**

Rain Water Leaders (RWL) in vital places or improper locations and installation of Rain Water Leaders.

Causes

In general, most architects plans do not show locations of RWL or even whether they are applicable or not. Consequently sub-trades tendering jobs determine the RWL locations, and then plumbers might put them in yet another location. Often because of this misunderstanding (or neglect of what is classified as a minor thing) the problem becomes a very costly one. RWL's are often installed too high or too low, in the wrong location or worse yet, not at all where a RWL must be to facilitate proper drainage from a roof.

Recommendation

Builders must ensure that RWL are shown on the drawings and in their proper locations.

4. **Problem**

Water leaking between fascia and eavestrough.

Cause

Two reasons for this problem are the installation of L trim and short shingles. In most cases eavestrough cannot be inserted under L trim because it is too tight and trough grading is necessary for water flow.

Recommendation

We agree that L trim is necessary on gable fascia, however, if it is felt that a flashing is necessary on the eaves fascia. It is recommended that shingle flashing be used rather than L trim. L trim for cosmetic reasons has an attractive curled edge which when trying to trough over it causes an inconsistent surface.

5. **Problem**

Cedar shakes and leakage.

Cause

Inconsistent shingle overhang. Example: ½ to 3 inch variation past fascia. Also, large protruding corners.

Recommendation

When cedar shakes are being used the corners should be trimmed to ensure water flows into trough instead of over it. It is recommended that on a cedar shake roof, a better job would be accomplished with the use of a 5 inch eavestrough. However, if the shingles are installed properly with a ½ inch overhang consistently, and the eavestrough is installed properly, a 4 inch eavestrough can be used.

WATER LEAKAGE

Water leakage is one of the most common consumer complaints. While it is acknowledged that leakage can result from innumerable causes several of the more frequent causes are dealt with here.

MASONRY

1. **Problem**

   Water seepage through brickwork.

   Recommendation

   All fireplaces constructed of brick should be siliconed above the roof levels with one flood coat immediately after washdown is dry.

2. **Problem**

   Erosion caused by chimney pan being cut back by bricklayer.

   Recommendation

   The chimney back pan installed by the roofer must extend 1" beyond the fireplace to divert water. This should not be cut and folded back by the bricklayer to facilitate his installation. When folded back (not cut) it can then be rebent to perform the function intended to divert water runoff.

   NOTE: It is also recommended that the counter flashing installed by the masons be stopped at least 1" from the deck.

SIDING

1. **Problem**

   Dutch gable leakage.

   Recommendation

   The use of "j" channel as a siding starter acts as a funnel for water to flow in behind the siding. The practice of using a "j" channel in this area is not recommended. Belt line flashing should be used as a starter.

   The roofing, including base flashing, should be completed prior to the installation of siding and fascia.

2. **Problem**

   Improper siding fit at fireplaces.

   Recommendation

   Exterior fireplace brickwork should be installed prior to siding. Fireplace measurements given to the siding applicators are often incorrect as a result of a change in the bricks, etc. An improper fit will often result if the siding is installed prior to the brickwork.

ROOFING

1. **Problem**

   Plumbing-heating stack leaks.

   Recommendation

   Ensure that the flashing for any roof cut-outs is installed under 2 shingles at the top of the flashing and the shingles are trimmed to fit, roof flashing is frequently being installed under only one shingle causing alignment of the shingle cut-outs allowing water to enter under the flashing.

2. **Problem**

   Leakage caused by downspout of higher portion of split level homes directing water against side lap of shingles.

   Recommendation

   No elbow should be installed at more than a 45° angle or less than a 30° angle from a wall.

   NOTE: On a split level roof where the lower roof extends onto the upper roof forming two valleys, the eavestrough is frequently left open forcing water against sidelap of shingles. The troughs should all be capped and a spout with an elbow should be installed to divert water to lower roof.

DESIGN

Watch design closely to ensure that no "dead valley" situations are created on roofing system.

ROOF LEAKS AROUND PLUMBING VENTS

Recommendation

Complaints on roof leaks from consumers are frequently automatically turned over to the shingling contractor. We have discovered that the leak is frequently occuring around a plumbing stack and is not attributable to the shingling contractor. The neoprene flashing that is currently in use is acceptable, however, your Sub-trade Committee reports that it must be counter-flashed with a one to two inch metal strip which must be nailed securely to the roof.

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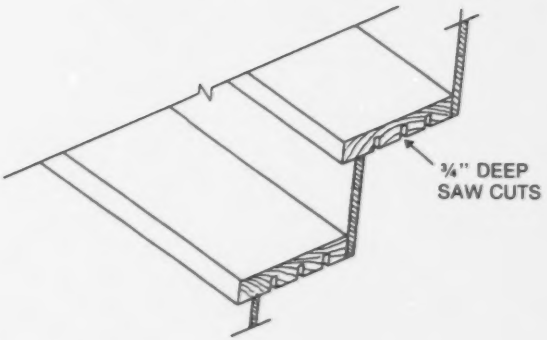
STAIR CONSTRUCTION

Problem

Squeaks, warped treads.

Causes

1. Nails that split through the edges of treads or risers cause squeaking, due to movement of the treads up and down on the nail.
2. Excessive moisture in dimensional lumber (treads) causes shrinking as it dries. This in turn results in loose nails and warped treads.
3. Insufficient nailing.

Recommendations

1. Use extra stringer in centre of stairs for centre support in stairs 36" or greater in width.
2. Glue treads and risers with a suitable adhesive.
3. Use 1" plywood or K.D. dimensional lumber for treads.
4. Use glue blocks.
5. If dimensional lumber for treads is used (min. 2") saw three cuts ¾" deep longitudially on underside of tread.